









UNIVERSITY QUESTION PAPERS  
1935

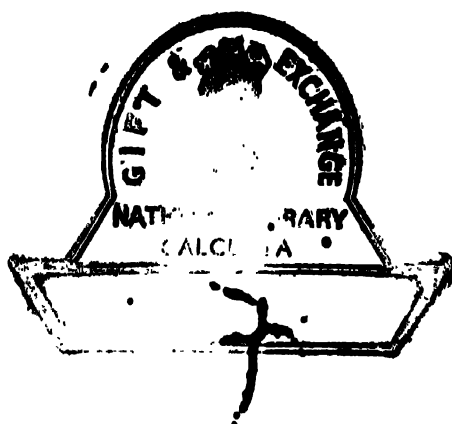


**UNIVERSITY OF CALCUTTA**

**UNIVERSITY QUESTION PAPERS**  
**FOR THE YEAR**  
**1935**



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## ERRATA

On page 557 (Heading) for  
'DIPLOMA OF SPOKEN ENGLISH'

*please read*

'DIPLOMA IN SPOKEN ENGLISH'





# UNIVERSITY QUESTION PAPERS

## Matriculation Examination

1935

### ENGLISH

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### PART A

#### TRANSLATION FROM BENGALI INTO ENGLISH

*Paper-setter*—MR. SYAMAPRASAD MOOKERJEE M.A., B.L., BAR-AT-LAW.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :-

(a) বিহারীলাল মিত্র বাগবাজারের বিখ্যাত মিত্র বংশে জন্মগ্রহণ করেন। তিনি বাংলায় কয়েকখানি ভাল বই লিখিয়াছিলেন এবং একখানি প্রসিদ্ধ সংস্কৃত গ্রন্থের ইংরেজীতে অনুবাদ করিয়াছিলেন। তিনি দানশীল ব্যক্তি ছিলেন। “দি রেফিউজ” নামে বৌবাজারে অসহায় চিরকল্প লোকদের যে আশ্রয়স্থান আছে, তাহার বাটী নির্মাণের জন্ত তিনি পঁচাত্তর হাজার টাকা দিয়াছিলেন। ডাক্তার মহেন্দ্রলাল সরকার কর্তৃক প্রতিষ্ঠিত বিজ্ঞান সভার জন্ত তিনি এক লক্ষ টাকা দান করেন। তাঁহার উইলে তিনি নারীশিক্ষার জন্ত কলিকাতা বিশ্ববিদ্যালয়কে বরাবর বার্ষিক আটচল্লিশ হাজার টাকা দিবার ব্যবস্থা করিয়া গিয়াছেন। তাঁহার এই দানটি বিশেষ উল্লেখযোগ্য। বাংলা দেশে ছেলেদের শিক্ষার জন্ত বড় দান কেহ কেহ করিয়াছেন, কিন্তু মেয়েদের শিক্ষার জন্ত এরূপ দান এ-পর্যন্ত কেহ করেন

নাই। মেয়েদের শিক্ষার জন্য বড় দান বোম্বাই প্রেসিডেন্সীতে অনেক করিয়াছেন।

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(b) সেকালৈ মগধে একটি প্রসিদ্ধ বিশ্ববিদ্যালয় ছিল। তাহার নাম নালন্দা। পাটনা হইতে কয়েক ক্রোশ দূরে তাহার স্থান বাহির হইয়াছে। মাটির তলে তাহার অনেক চিহ্ন পাওয়া গিয়াছে। এই নালন্দা বিশ্ববিদ্যালয়ে বৌদ্ধ ধর্মশাস্ত্র পড়ান হইত। এখানে অনেক অধ্যাপক ছিলেন। নালন্দায় দেশ বিদেশ হইতে দলে দলে ছাত্র আসিয়া বৌদ্ধ ধর্মশাস্ত্র অধ্যয়ন করিত। এমন কি, চীন প্রভৃতি দেশ হইতেও ছাত্র আসুর কথা জানা যায়। এই নালন্দা বিশ্ববিদ্যালয়ে বঙ্গদেশের এক রাজপুত্র অধ্যয়ন করিতে আসিয়া ক্রমে তাহার অধ্যক্ষ পর্য্যন্ত হইয়াছিলেন। যিনি এইরূপ গৌরবলাভ করিয়াছিলেন তাহার নাম শীলভদ্র। শীলভদ্র নানাদেশ পরিভ্রমণ করিয়া, নালন্দায় আসিয়া তথাকার অধ্যক্ষ ধর্মপালের নিকট বৌদ্ধ ধর্মশাস্ত্র অধ্যয়ন করিতে আরম্ভ করেন। তিনি ছাত্র জীবনান্তেই একজন পণ্ডিতকে পরাজিত করিয়া সেই দেশের রাজার নিকট হইতে একটি নগর পুরস্কার পাইয়াছিলেন।

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(c) মেরী কিংসলি নামক একজন ইংরেজ রমণী ভ্রমণ করিতে অত্যন্ত ভাল বাসিতেন। তাহার মাতাপিতার মৃত্যুর পরে তিনি বাহির হইয়া পড়িলেন এবং অবশেষে আফ্রিকায় উপনীত হইলেন। তখন আফ্রিকাকে ক্রমশঃ মহাদেশ বলা হইত; কারণ উহার অনেক স্থলই অপরিজ্ঞাত ছিল। মেরী আফ্রিকার বনে জঙ্গলে ভ্রমণ করিতে লাগিলেন। একবার তিনি একটি গ্রামে গিয়া, তথায় সে রাত্রি যাপন করিতে মনস্থ করিলেন। কিন্তু লোকের চাঁৎকারে নিদ্রা আসিল না। শুনিলেন একটি চিতা-বাঘ ফাঁদে আটকা পড়িয়াছে। সেই চিতা-বাঘের কাতর চাঁৎকারে মেরী স্থির থাকিতে পারিলেন না। তিনি আশ্বে আশ্বে উঠিলেন এবং অন্ধকারে সেই শব্দ লক্ষ্য করিয়া চলিলেন। জালের নিকটে গিয়া তিনি তাহার খোঁটাগুলি একে একে তুলিয়া ফেলিলেন। মেরী ভাবিয়াছিলেন যে ছাড়া পাইলেই বাঘটা জঙ্গলের দিকে ছুট দিবে। কিন্তু সে তাহা না করিয়া পোষা কুকুরের মত মেরীর চারি দিকে ঘুরিয়া বেড়াইতে লাগিল। মেরী অবাধ হইয়া গেলেন।

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## TRANSLATION FROM ASSAMESE INTO ENGLISH

Paper-setter—MR. SURYYAKUMAR BHUIYAN, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate TWO of the following passages into English :—

20 × 2 = 40

(a) তোমালোকে স্বৰ্গীয় ছাৰ আশুতোষ মুখোপাধ্যায়ৰ নাম নিশ্চয় শুনিছা। তেওঁয়ে অমৰণ যশস্তা বাখি যাব পাৰিলে ইয়াৰ মূল কাৰণ হৈছে তেওঁ সকলো কামকে বিশেষ মনোযোগেৰে কৰিছিল। এবাৰ ছাৰ আশুতোষ বঙ্গদেশৰ নাড়াইল নামে ঠাইলৈ গৈছিল। নানা বিষয়ত বিচক্ষণ বুদ্ধি দেখুৱাই তেওঁ নাড়াইলৰ মানুহৰ মনত বিস্ময় জন্মাইছিল। এদিন এজন পণ্ডিতে আশুতোষক সুধিলে,—“ডাকৰীয়া, আপুনি তাচ খেলিব জানেনে?” ছাৰ আশুতোষে কলে,—“জানোঁ, মই বিশেষ যত্নেৰে তাচ খেলা শিকিছোঁ।” পাচত দেখা গল তাচ খেলাত তেওঁক কোনেও ইকৰাব নোৱাৰিলে। আন এদিন পণ্ডিতজনে সুধিলে,—“আপুনি সাত্ত্বিক জানেনে?” এইবাবে ছাৰ আশুতোষে উত্তৰ দিলে “হয়, জানোঁ।” নৈত ছাৰ আশুতোষে সাত্ত্বিক দেখি মানুহ অৰাক হল। তাৰ পাচত এদিন সেই পণ্ডিতজনে সুধিলে, “আপুনি গান গাব জানেনে?” ছাৰ আশুতোষে এনে সুন্দৰ স্বৰলা স্বৰেৰে গান গাবলৈ ধৰিলে যে সকলোৱে তেওঁক প্ৰশংসা কৰিবলৈ ধৰিলে। যি কামেই হওক, হাজাৰ সামান্য সেই কামটো হওক, ছাৰ আশুতোষে যি কাম হাতত লৈছিল সেই কামতে তেওঁ মন পুতি লাগিছিল, আৰু তাক ভালকৈ কৰিবলৈ তেওঁৰ সকলো শক্তি, সকলো উত্তম আৰু সকলো চেষ্টা প্ৰয়োগ কৰিছিল। মৰমৰ ছাত্ৰসকল, তোমালোকে, যি কাম কৰা তাক মনোযোগেৰে কৰিবা। তেনে কৰিলেহে তোমালোকৰ নিজৰ, নিজৰ পৰিয়ালৰ, নিজৰ ওচৰ-চুবুৰীয়াৰ আৰু নিজৰ দেশৰ নাম উজ্জল কৰিব পাৰিবা।

(b) আমাৰ ইয়াত স্মৃতিৰা টেকাৰ যেনে আদৰ পৃথিৱীৰ সকলো দেশতে তেনে আদৰ। যুৰোপ আৰু আমেৰিকাত ই প্ৰথম শ্ৰেণীৰ ফল; আন্ধৰ ইয়াৰ তলতে। আমাৰ দেশতো ইয়াক সৰ্ব্বশ্ৰেষ্ঠ ফল বুলি ধৰিলে বোধ হয় একো ভুল নহব। স্মৃতিৰা পোনপ্ৰথমে চীনদেশত জন্ম হয়। এই দেশৰ পৰাই পৃথিৱীৰ নানা দেশলৈ ইয়াৰ খেতিৰ প্ৰচলন হয়। ভাৰতবৰ্ষলৈ ইয়াৰ

খেতি চীনদেশৰ পৰা অহা বুলি বহুতে কয়; আৰু বহুতে কয় যে চীনৰ দৰে ভাৰততো অতি পূৰ্বকালত স্তম্ভিৰাৰ গছ আছিল। য়ুৰোপৰ দক্ষিণ অংশত থকা দেশবোৰত—যেনে, ইটালী, ফ্ৰান্স, স্পেইন আৰু গ্ৰাছৰ কোনো কোনো ঠাইত স্তম্ভিৰাৰ খেতি হয়। কিন্তু আমেৰিকাৰ কেলিফৰ্ণিয়া দেশত বৰ প্ৰচুৰ পৰিমাণে ইয়াৰ উৎপন্ন হয়। এই দেশৰ টেক্সাৰ বৰ ডাঙ্গৰ আৰু বৰ সোৱাদ। কেলিফৰ্ণিয়াৰ স্তম্ভিৰা ভিন্ন ভিন্ন দেশলৈ যাব ধৰিছে; আমাৰ দেশলৈ হলে অহা নাই। অসমৰ প্ৰায় সকলো ঠাইতে স্তম্ভিৰাৰ খেতি হয়। পৰ্বতত হোৱা টেক্সাতকৈ ভৈয়ামত হোৱা টেক্সাৰ সোৱাদ বেচি। এজোপা ভাল স্তম্ভিৰাৰ গছৰ পৰা বছৰি তিনি হেজাৰকৈ ফল পোৱা যায়। কেলিফৰ্ণিয়াৰ প্ৰত্যেক গছে অস্তুতঃ চাৰি হেজাৰ ফল দিয়ে। স্তম্ভিৰাৰ গছ এশ বছৰৰো বেচি দিন জীয়াই থাকে। নতুন গছতকৈ পুৰণা গছে ভাল ফল দিয়ে। স্তম্ভিৰা টেক্সা খালে একো অমুখ-কিমুখ নহয়। নৰীয়া অৱস্থাতো পকা স্তম্ভিৰা টেক্সা খাব পাৰি। খাছিয়া পৰ্বত, শ্ৰীহট্ট আৰু কামৰূপৰ সোণাপুৰ নামে ঠাইত বছৰি স্তম্ভিৰা টেক্সাৰ ডাঙ্গৰ বেপাৰ হয়।

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(c) দেশ এখনৰ উন্নতি বা অৱনতি শিক্ষাৰ ওপৰত নিৰ্ভৰ কৰে। আজি আমাৰ দেশখনৰ দুৰৱস্থা হোৱাৰ কাৰণ একমাত্ৰ শিক্ষাৰ অভাব। শিক্ষা মানে মই বি-এ বা এম্-এ পাচ কৰাকে অৰ্থ কৰা নাই। অৱশ্যে বি-এ এম্-এ পাচ কৰাটো আবশ্যক। কিন্তু তাতোকৈ অগ্ৰ ধৰণৰ কিছুমান শিক্ষা আমাৰ অতি আবশ্যক, যিবিলাকৰ সহায়েৰে আমাৰ দেশৰ ভবিষ্যৎ উন্নতি হব। দেশৰ মঙ্গলৰ একমাত্ৰ সম্বল আমাৰ বাই-ভনীসকল, যিসকলৰ ওপৰত আমাৰ ভবিষ্যৎ নিৰ্ভৰ কৰে। যি দেশত সতী জয়মতীৰ নিচিনা নাৰী উপজিছিল সেই দেশত এতিয়াও বহুত সতী জয়মতী আৰু বেউলাৰ নিচিনা আদৰ্শ ৰমণী আছে। কিন্তু অকল সতীৰ আদৰ্শ হৈ থাকিলেই দেশৰ মঙ্গল নহয়। তাতোকৈ নতুন জানিব লগীয়া আৰু শিকিব লগীয়া আছে। শিক্ষাই হৈছে সকলো পিনে উন্নতিৰ মূল। শিক্ষা হলে মানুহৰ স্বাস্থ্য ভাল হব, আৰু স্বাস্থ্যবন্ত হলে সকলো কাম কৰিব পাৰিব। স্বাস্থ্যবন্ত হলে অসমীয়াই আজি নিজে নিজৰ ভবিৰ ওপৰত থিয় হব পাৰিব। সেই শিক্ষা আমাৰ বাই-ভনীসকলৰ বৰ আবশ্যকীয়। কি কি কাৰণত আমাৰ স্বাস্থ্য বেয়া হয়, কেনেকৈ তাক ভাল কৰিব পাৰি, সেই আটাইবোৰৰ বিষয়ে আমাৰ জনা দৰ্কাৰ। স্বাস্থ্য বেয়া

হোৱাৰ ঘাই কাৰণ হৈছে,—শাৰীৰিক পৰিশ্ৰমৰ অভাৱ, ভাল খাদ্য খাবলৈ নোপোৱা, বেমাৰৰ ভাল চিকিৎসা নোপোৱা, আৰু চুফ-চিকুন হৈ থকাৰ প্ৰতি আওহেলা।

TRANSLATION FROM MANIPURI INTO ENGLISH

Paper-setter—MR. SANJIBAN NADIA SINGH

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate any two of the following passages into English :—

(a) অৰ্জুন—ওষোৱক ফৈজদা মনিপুৰ হাইবা লৈপাক অসে। চিংনা ইকোই কোইশলগা ওষোৱক ফজবা লৈপাক অমা লৈৱশ্বেদা। ফজবা চিংজাওনা মখুং মশা ফন্দুনা লৈপাক মচা অমিৰ্ সন্নি তৌৱি। চিংয়া তময়াদা ঐথোইনা লাকপা মতমদা লৈহৌৱিবা লৌবুক ফৈজদা; তুৱেন মচা মচানা দেশগী মতিকচাবা মণ্ড লৌহুনা চেম্বিবা ফৈজদা। স্না কোমুংগী মাইগে মৱিমক্তা তাৱিবা খুংগনা ফজৱিবা; মতম লৈবা থিৰিক্তা মহাদেবগী নামদা তাথৱে। হৌৱিবা উপাধিনা ফজৱিবা। কোমুংগী ময়াইদা লৈৱিবা মন্দিৱ অমমুং শঙ্গাই ওষোৱক চংখোল্লিদা।

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(b) অহুগী মতুংদা অৱাং পাংনা চংলকলে। মফম অহু মী চিকলকলে। হৌজিক্তা মূংশা শাৱশ্বা অহু থংহৌদনা লৈচিন থাৱক্তুনা পুশ্চম মমথে। খৱা চংলগা লমলোং মৱি ফাংবা অমা উৱে। নোংচুপ পাংনা চংখিবা লম্বী অহুগী মতুং ইয়া চংশিল্লকলে,—লম্বী অহু শোংলবা নাৱক অমগী ময়াঙি হেক যৌৱকপদা মাংথে। মফম অহুগী অকিবা শকফম অহু উবদা লম্বী অহু কিহুনা লোংখুবোই! লম্বীনা মাংখিবা মফম অহু, চাঁং অনিগী মৱক্তা মোংফম অমা ওইৱমলে। মচি মচি খুদিংদা শকুনা মপৈ মপৈ তাহুনা লৈবা উৱে; মচি অমদা মীগী মখোং অভংপা লাংজানা চেদুনা পুৱি।

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(c) মত্মিনচিংবা লৈপাকী অঙম্বা তাবিষু, ঐনা মনিপুৰ কোবা লৈপাক অসি শাদন তৌৱকপা চহি মতম কুইৱে; অসিগী মমুংদা ৰাজ্যদা কৱম্ব

अमल थोकपगे अमल लैपाक एहाकपू करि हाईना डानरिवगे ?  
 महादेवना इपुथो चिउरोथता प्रिय लैपाकनि ; अहदगीना हजिक फाँव  
 इवुथोशिङ्गी मथं मथं पाल्ले । हजिकि एना पाल्ले । अहक कुइरवा  
 असि इपा हाऊक अमल इवुथोशिङ्गी हाऊकता ऐगी गहर्क अमल किरात  
 प्रजाना याल्ल हंडाईना लैरकले ; इहाऊक असिना प्रजाना ओगावदि पामदे ।  
 अहना मथोईगी अबावा मथे एडोन्ना हाईयू ; एहाक उष मथे तौहना  
 प्रतिकार तोगे ।

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TRANSLATION FROM HINDI INTO ENGLISH

Paper-setter—PROF. SUNTIKUMAR CHATTERJI, M.A., D.LIT.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate any TWO of the following extracts into English :—

(a) नीचे यमुना का जल बहा रहा है ; पास ही पहाड़ियों पर घना जंगल था । गुरु गोविन्दजी चट्टान पर बैठे शास्त्र-चर्चा कर रहे थे । उनका सम्पत्ति-शाली शिष्य रघुनाथ आया, और उनके चरणों में प्रणाम करके बोला—“मैं अपनी तुच्छ भेंट लाया हूँ, यद्यपि यह भेंट आप के सर्वथा अयोग्य है ।”

उसने गुरु गोविन्दजी के समीप दी रत्न-जटित बहु-मूल्य सीने के कड़े रख दिये । गुरुजी ने एकको हाथ में उठा लिया । रत्नों से ज्योति निकल रही थी । गुरु गोविन्दजी कड़े की हाथ में लेकर घुमाने लगे । कड़ा हाथ से छुटकर जल में जा गिरा । “क्या हुआ ?”—कहकर रघुनाथ जल में कूद पड़ा । शान्त-चित्त गुरु गोविन्दजी फिर शास्त्र-चर्चा करने लगे ।

सन्ध्या हो गई । रघुनाथ लौटकर गुरुजीके समीप आया । उसके तन्मात्र कपड़े भीगे हुए थे । हँफ़ते हुए उसने कहा—“यदि आप बतायें कि कड़ा किधर गिरा है तो मैं अब भी उसे निकाल लाऊँ ।”

गुरु गोविन्दजी ने दूसरे कड़े की जल में फेंककर कहा—“बहाना” ।

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(b) सारकिल पर डेनमार्क की सैर ।

कुछ दूर आगे जाने पर देखा, और भी दो युवक सारकिल से जा रहे हैं । निकट पहुँच जाने पर उन्होंने कहा—“गुड्डे” । मैंने भी उसका उत्तर दिया । मैंने समझा कि वे अंग्रेजी



जानते हैं, पर आगे चलकर पता चला कि डेनिश भाषा में भी नमस्कार करने का वही ढंग है। इन दो शब्दों से अधिक, अंग्रेजी जाननेवाला, डेनिश भाषा का एक शब्द भी नहीं समझ सकता। हम लोग कुछ देर चुपचाप चलते रहे। थोड़ी देर बाद, उन दो युवकों में से लम्बे आदमी ने मुझ से डेनिश में कुछ पूछा। मैंने उसका जर्मन में उत्तर दिया कि मैं डेनिश नहीं समझता। फिर उसने जर्मन में प्रश्न किया—“क्या आप इटालियन हैं?”

मैंने हँसते हुए कहा—“नहीं”।

“फिर?”

“मैं भारतवर्ष का हूँ”।

“क्या आप उतने दूर से साइकिल पर आ रहे हैं?”

“नहीं, मैं जर्मनी में अध्ययन करता हूँ। आजकल छुट्टी है, इस लिए उत्तरी देशों की ओर करने निकला हूँ”।

“आपको डेनमार्क कैसा मज़लूम पड़ता है?”

“कैसा कहा जाए? अभी आधा घण्टा भी नहीं हुआ कि मैं यहाँ पहुँचा हूँ”।

(c) हमलोगों की तरह दुनिया की सब जातियाँ सभ्य नहीं हैं। तुम यह जानते हो होंगे कि अफ्रिका के रहनेवाले हबशी सभ्य नहीं माने जाते। हमलोगों ने लिखने की रीति हजारों बरस पहिले निकाली थी। पर वह लोग अबतक लिखना नहीं जानते। भारतवासों भी किसी समय असभ्य थे। जैसे अफ्रिका के बहुतेरे रहनेवाले अबतक बनों में रहते और बन में जो कुछ होता है उसको खाते हैं। ऐसीही भारत के बनों में अब भी ऐसे लोग रहते हैं, जो कपड़े नहीं पहिन्ते और बन में जो कुछ मिलता है खा लेते हैं। वह हमलोगों की तरह खेतीबारी नहीं करते और न मेंह से बचने के लिये उनके घर होते हैं। “खोंड”—लोग, जो मध्यदेश के बनों में रहते हैं; राजपूताने के “भील”; और नीलगिरि के कुछ पहाड़ी,—ऐसीही लोग हैं। हम इन सब की “कोल” कहते हैं। यह ही भारत के असली रहनेवाले थे।

एक और भी जाति है जो हमारे इतिहास के आरंभ से पहिले भारत में रहती थी। यह “द्रविड़” जाति है। तिलंगू, तामिल, कनाडी और भारत के दक्षिण रहनेवाले सब द्रविड़ हैं। कोलों की अपेक्षा द्रविड़ बहुत सभ्य थे। यह लोग खेती करते थे और कपड़े पहनते थे। 20

TRANSLATION FROM MAITHILI INTO ENGLISH

Paper-setter—MR. GANGAPATI SINGH, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate any two of the following passages into your own English:—

(a) सुलतान क आशा पावि भीम सिंह तखनहिं, पदमिनी क दीली में प्रवेश कयलन्हि । नियमित आध घण्टा बीति गेल । एकी घण्टा बीति गेल किन्तु तेयो पदमिनी दीली सँ बाहर नहिं भेलीह । तखन सुलतान अत्यन्त अधीर भै उठलाह । आइ ओ पदमिनी काँ बलात्कार दीली सँ लै अनवाक हेतु एक सैनिक काँ आशा दै देखयन्हि । किन्तु किछुए काल में कोलाहल नि पडलन्हि । जिज्ञासा केला पर ज्ञात भेलन्हि कि राणा भीम सिंह काँ एक तेज छोड़ा पर सूचदाय शत्रु सब आघा रास्ता पार कै गेल ।

सुलतान तँ आब क्रोध सँ अन्ध भै गेलाह । सहसा राणा भीम सिंह क अनुसरण करवा क हेतु सुलतान अपन सेना कै आशा दै दलन्हि । राजपूत गण जे कैयो रास्ता में पावेल गेलाह, सबहिं काँ सुलतानी फौज मारैत चल गेल ; किन्तु अन्त में जावत राणा भीम सिंह लोकनि काँ पकड़न्हि तावत धरि राणा भीम सिंह लोकनि चित्तौरगढ़ में पहुँचि गेल छलाह । आब युद्ध अनिवार्य भै गेल । पदमिनी अपन स्वामी काँ राजमहल में सकुशल वापस अबैत देखि परम आनन्दिता भै गेलीह ; किन्तु फेर भावी अनिष्ट क आशङ्का सँ हुनक हृदय दहलि उठलन्हि । आब युद्ध प्रारम्भ भै गेल । दुनू दिशि सँ अनेकी वीर योद्धारण लड़ैत लड़ैत धराशायी भै जाइत गेलाह । किला क बाहर क भूमि सर्वत्र रक्त सँ पटि गेल । गिद्ध कुकुर मांस-रुधिर क लोभ सँ मड़राय लागल । सर्वोत्तम राजपूतगण गोरा तथा वीरवादल क अनुकरण कै वीरगति काँ प्राप्त करैत गेलाह ।

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(b) कमला क ई दुरवस्था देखि सुरेन्द्र खेद सँ सन्न रहि गेलाह । कमला ओहि समय ज्वर क प्रकोप सँ बिहारीन पर बेहीश पड़लि रहथि । एक गोट बूढ़ि खवासनी हुनक मुँह पर पट्टा बाँधि रहल छलन्हि । स्वामी उदास भै लगहि में चुपचाप बैसल रहथिन्ह । मुदा कमला काँ किछुओ टा सुधि नहिं रहन्हि कि हम कतय छी, वा हमरा लग में के के बैसल अछि ।

अपन परिचयता स्त्री क ई दुःस्थिति देखि सुरेन्द्र निराशा सँ दहलि उठलाह हुनक आँखि सजल भै गेलन्हि । केवल चुपचाप ओहि दासी क मुँह दिशि तकैत रहि गेलाह ।

दासी हुनक अन्तःस्थित भाव जानि अत्यन्त उदास भै कहै लगलन्हि :—‘बाबु ! आइ तीन दिन सँ इयैह हाल छन्हि । भरि दिन राति में केवल तौनिये चारिये बेरि कनेक कनेक पानि पीबि लैति छथि । और जखन कहखन फीज में आवि जाइत छथि, तखन केवल अँहीक टा नाम रटथि

लगैति छथि । आन्तरबाबू कहैत छथिन्ह, जे हुनका मन में कोनो भारी अवसिद्ध क चीट छन्हि ।” ई कहैति श्री दासी क बाँखि सँ दहो बहो नीर जाय लगलैक । बेचारी बाँचर सँ बाँखि पोछैत फेर कमला क मुँह पर पट्टा होँकय लागल । 20

(c) एहि ठाम हमरा केवल एक बात सँ सावधान करब आवश्यक बुझना जाइछ । हमर भारतवर्ष सभ दिन सँ संसार क शिक्षागुरु थिक, और एखनहुँ एकरा संसार केँ बहुत किछु शिक्षा देब आवश्यक छैक । यदि हम चाइ पतित छी तँ एकर अर्थ ई नहिं जे हम अपना उत्थानार्थ इस अथवा अमीरका क अनुकरण करी । हम जहिना अपना ऋद्धि-प्रथा क अन्य अनुकरण करवा क विरोधा छी, तहिना छी इस अथवा अमीरका क नवीन आदर्श काँ अन्य में अनुकरण करवाक । यथार्थ पूछी तँ ओहि सभ पाश्चात्य देशक स्थिति और असन्तोषजनक अछि । ओहि ठामक श्रमप्रणाली तेहन दोषपूर्ण छैक जे पूजोपति और मजूरदल एक दिशि झगड़ि रहल छथि, तँ राजा प्रजा दोसर दिशि लड़ि रहल अछि । वृत्कार लोकनि क दल कार्यशील सँ लड़ैछ, तँ काला नियो गीरा लोकनि सँ लड़ि रहल अछि । अधिक और कौ ? परिस्थिति ततेक अधलाह भय गेल छैक कि जँ पति एम्हर अपना स्वत्वह्वि में लागल अछि तँ पत्नी अपना अधिकार-ह्वि में व्यस्त देखल जाइछ । तँ, हमरा लोकनि काँ पाश्चात्य सभ्यता क अनुकरण करब कथमपि उचित नहिं । 20

#### TRANSLATION FROM NEPALI INTO ENGLISH

Paper-setter—RAI SAHEB HARIPRASAD PRADHAN, M.A.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate into English any two of the following passages :— 40

(a) भाषाको उन्नति न भै हामी उन्नति कदापि हुन सक्दैन । हामी विचार तथा हामी भावलाई विचार गराउने तथा गर्ने साधन मातृभाषाको उन्नति नै हो । मातृभाषा द्वारा जनतामा उच्च विचार-धारा न फिजि-उजेल पढेका दुई चार जनाले ज्ञानका कुरा गरिर केही सार छैन । नौट्टी माटो उस माथी पनि दुइजाले परिपूर्ण भयेको खेतमा कुरेको बिक्रि न मरी कैलै रहन्छ्यो ? समाजमा कुनै असल कुरा बुझ्ने तथा तेस सँग सद्भावभूति प्रदर्शन गर्ने जनता हुनु पर्छ अर्थान् समाजको स्थिति सद्भावका अनुकूल सद्भावभूति पूर्ण भौ केही विचार तथा दृष्टान्ति भयेको हुनु पर्छ । सो कुनै असल कुरा गर्दा न भै न हुने ज्ञानात्र मातृभाषाको उन्नतिमा निर्भर छ ।

(b) पतिगृहमा गएपछि अहल्याले बडी भक्तिपूर्वक शाय र शयरा को पनी शुश्रूषा गर्न लागिन् । उनीहरूको पनी तिनका उपर दुखी दया थियो । यसैले तिनी शाय र शयरा को बडीक प्रितिपात्र बुझारी भइन् । हुनता उनको घरमा दास दासीहरूको अभाव थिएन । तथापि अहल्या स्वयं आफ्नी घरमा परिचाएको सारा काम काज गर्दथिन् । सो काममा उनले कहिल्यै पनी ओदासीन र व्यवहारमा विरक्ति देखाइदैनन् । उनो सारा दिन घरको काम गरी राखिमा सबभन्दा पछी-बाट सुत्थिन् । भोली पल्ट पनी उनो सबभन्दा पहिले नै उठौ घरको काममा लाग्दथिन् । आजकलका स्त्रीजातिहरू आफ्नो धन-मद र “दुखी कु” भन्ने घमण्डले गृहिणीयोग्य परिश्रममा विमुखभई आफ्नो घरमा अभाव र अशान्तिको वास गराउँदछन्, त्यस्ता स्त्रीहरूले अहल्याको आचरण सर्वथा शिस्त आवश्यक छ ।

(c) सीताजीका यस्ता बचन सुनेर रामचन्द्र फेरी बाह्रालाई बुझाउन लाग्नुभयो “प्रिये ! वन अत्यन्त डरलाग्दो हुन्छ, उहाँ अनेक छिन्क जन्तुहरू हुन्छन् । पाँच पाँचमा अनेक विपत्तिको आशङ्का रहन्छ । फेरी बालक कालदेखि नै राजसुखमा बसेको ऐश्वर्यसुखको काखमा बढेकी तिमिले कहिले पनी दुःखको अनुभव गरेको छैनो ; वन वनमा घुम्नु, कन्द मूल खोजी पेट भर्नु, छहराबाट खसेको पानीले प्यास सेट्नु, रुखको तल तिर अथवा अनाहत आकासको तल तिर सुत्नु, इत्यादि दुःखको काम तिम्रोबाट कसरी होला ?, यी सब दुःखलाई तिम्री कसरी सहन गरीौ ? यस कारण तिम्री मैले भनेको मान । यहाँ वसे भेरी मङ्गल चिताऊ । तिम्री वनमा संवन्ध दुःखसहन गर्न शक्ती छैनो” रामचन्द्रले यसरी धेरै प्रकार सँग संभाउनुभयो तर सीताजीले यी सब सुनेर पनी वनमा जाने अटल प्रतिज्ञालाई छोड्नुभएन ।

#### TRANSLATION FROM MARATHI INTO ENGLISH

Paper-setter—PROF. D. R. BHANDARKAR, M.A., PH.D.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate into English any two of the following passages :—

(a) बनारस शहर अर्थात् त्या वेलीं गाढ भोंप घेत होतीं. धन्वीच्या दिवसांत इतक्या पहाटेस कोण आपला जवदार बिझाना सोडून घराबाहेर पडणार ? शहरांतल्या त्या भयाण निस्तब्धतेतून आम्हीं पाठ जण आपला मार्ग आक्रमण करीत होतीं. एखाद्या भोंपे गेलेल्या जुवाणाला आमच्या सायकलीं साठीं वाट सोडावी लागली तर तो हलूच गुरगुरत आपली नापसंती दर्शवीत असे, कधीं कधीं आमच्या पेकीं कोणाची तरी सायकल तेल धाडेंसेंच घालून तिला तसेंच चालविल्या-

बहुल कुरकुरत होती. आणि प्रातःस्नानाला चाललेले कांहीं भाविक लोक तोडाने देवाच्या नामाचा जप करीत आपला मार्ग आक्रमत होते. 20

(b) हा संघ आयुर्वेदाची सेवा अर्थात् त्याची सर्वांगीण उन्नति करण्याकरिता सन १९१४ साली अहमदनगर येथे स्थापन करण्यांत आला. सदर संघ स्थापन झाल्याच्या अगोदरपासूनच नगर येथे आयुर्वेद-महाविद्यालय सन १९१७ पासून सुरू आहे. सदरच्या विद्यालयांत आयुर्वेदाचे शिक्षण औपपत्तिक व प्रत्यक्ष असे उभयविध दिले जाते. संघस्थापनेनंतर हे कार्य बहुतांशी सद्याचे सभासदच करीत आहेत. त्याचे पूर्वी गांवांतील प्रमुख वैद्य व डाक्टर विद्यालयांत येऊन काम करीत असत. विद्यालयसंस्थेचे दोन दवाखाने व एक चिकित्सामंदिर आहे त्यांत गोरगरिबांना कांहीं मोबदला न घेता औषधोपचार करण्यांत येतात. प्रत्यक्ष शिक्षणाकरिता “शबच्चदन-शाला” विद्यालयसंस्थेने स्थापन केली आहे 20

(c) ज्या देशांत भूकंप विरला तेथे तो भाला म्हणजे दैवी रोष किंवा पापाचा परिणाम गणला जातो सन १७५५ मधल्या भूकंपानंतर इंग्लंडांत पाद्री म्हणत की लिस्बन्मध्ये कॅथॉलिक लोक आहेत म्हणून हा भूकंप भाला. याच्या उलट लिस्बन्मधील उरलेल्या लोकांनी ठरविले की, त्यांच्यामध्ये कांहीं प्रॉटेस्टंट होते म्हणून हा उत्पात भाला व म्हणून त्या प्रॉटेस्टंटाना बलजबरीने दीक्षा देऊन कॅथॉलिक करण्यांत आले. परवाचा बिहाराचा भूकंप सुद्धा कांहीं सनातन्यांनी गांधीजींच्या पापाचा परिणाम व उलटपत्ती गांधीजींनी ती अस्पृश्यतेच्या पापाचा परिणाम असे ठरविलेच की नाही ? याचेवढे भूकंपामुळे प्राणहानी वेसुमार होते एवढेच नाही, तर जीवंत राहिलेल्या लोकांच्या मनावर सुद्धा वेडगल परिणाम उत्पन्न होतात. असे सिद्ध झाले. 20

#### TRANSLATION FROM URDU INTO ENGLISH

Paper-setter—MAULAVI SHAH KALIMUR RAHMAN, M.A.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate into English any two of the following extracts:—

A

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تھوڑے زمانہ کی بات ہے کہ مضافات عظیم آباد میں نواب امیر الدولہ  
ایک برے دولت مند رہتے تھے۔ انکے بہت سے گاؤں تھے۔ صرف زمینداری سے

دو لاکھ روپیہ کی آمدنی تھی۔ لیکن نواب صاحب ایک بھولے بھالے آدمی تھے۔ انکی علمی لیاقت بھی معمولی تھی۔ بیس پچیس مصاحب تھے۔ دن رات ہنسی کھیل رہتا تھا۔ کبھی شطرنج ہے۔ کبھی گنجیفہ۔ کبھی چوسر۔ کبھی بٹیروں کی لڑائی ہے۔ انکے ہاں نہ کوئی علمی جلسہ تھا۔ نہ زمانے کی حالتوں پر نظر تھی، اور نہ زمانہ کی ضرورتوں سے خبر تھی۔۔۔ شب و روز مصاحبوں کی فرج نواب صاحب کو آسمان پر چڑھائے رہتی تھی۔ اور ماشاء اللہ اور سبحان اللہ کی آوازیں سے کمرے گونجتے رہتے تھے۔ یہ مصاحب نواب صاحب پر اس طرح چھائے ہوئے تھے۔ کہ نواب صاحب کو اپنی دولت اُڑانے کے سوا کوئی کام نہ تھا۔ \*

B

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تیمور کی وفات کے بعد اُسکی عظیم الشان سلطنت بالکل درہم برہم ہو گئی تھی۔ اسکے پوتے ابو سعید نے پھر اسے قائم کر لیا۔ ابو سعید کے بعد سلطنت اسکے بیٹوں میں منقسم ہو گئی۔ منجھلے بیٹے عمر شیخ مرزا کے حصہ میں ملک فرغانہ آیا۔ اسکی زندگی اپنے بھائیوں کے ساتھ لڑائی میں کئی۔ سنہ ۱۴۹۴ ع میں جب اُسنے وفات پائی اسکا بیٹا ظہیر الدین محمد بابر جس کی عمر اس وقت بارہ برس کی تھی فرغانہ کے تخت پر بیٹھا۔ شروع میں اُس نے بہت سی مصیبتیں جھیلیں۔ کئی مرتبہ دشمن اسپر غالب آئے اور اُس کو ملک چھوڑ کر بھاگنا پڑا۔ حملہ کر کے پھر اپنا ملک دشمنوں کے قبضے سے چھین لیا۔ اسیطرح دس برس تک مخالفین سے لڑتا رہا۔ آخر تنگ آکر اپنی آبائی سلطنت سے ہاتھ اٹھایا اور کابل کے قرب و جوار میں کچھ ملک فتح کر کے وہاں اپنی عملداری قائم کی۔ \*

## C

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باپ نے جو یہ اپنی رام کہانی سنائی بیٹے پر اس طرح کی ہیبت چھائی کہ چونک پڑا۔ جاگا تو پھر رھی دان تھا اور رھی تھماردار برس کا سامان۔ بی بی پاس بیٹھی ہوئی۔ آہستہ آہستہ پنکھا جھل رھی تھی۔ میاں کی آنکھ کھلی ہوئی دیکھ اسکی جان میں بھی جان آئی۔ ورنہ جس گھڑی سے میاں نے جی بُرا کیا تھا سہمں کے مارے کا تو بدن میں لہو نہیں تھا۔ نضوح آتھ بجے ڈاکٹر کی دوا پی کر جو پڑا تھا تو اس وقت کا سو یا سو یا اب کہیں دو بجے جا کر ہوشیار ہوا۔ چونکہ ڈاکٹر کہہ گیا تھا کہ نیند اگر آگئی تو جاننا کہ بیمار بچ گیا اسے سو جائے سے سب کو تسلی سی ہو گئی تھی مگر جب زیادہ دیر ہوئی تو عورتیں پھر گہرا لے لگیں کہ نہیں معلوم کہ بخت ڈاکٹر کیسی دوا پلا گیا ہے کہ دوپہر پڑے پڑے گذر گئے کررت نہیں بدلی خدا جانے اندر سے جی کیسا ہے اور دل پر ایسی کیا آن بنی ہے کیونکر ہوش آئیگا دیکھئے کیا ہوتا ہے \*

## TRANSLATION FROM KHASI INTO ENGLISH

*Paper-setter*--Mr. ROY ROWLAND THOMAS M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :--

(a) Hangta te ki la iathiah naduh mynstep sngi Balang haduh mynmiet sngi Saitjain, khlem unwei u soh khaw lane shijaw ka um dih. khlem jingshai, khlem uno uno u ban wan iakylly kumno ki ia long. Kumta ki la ia don hangta ha ka jinglong kaba shitom, bad jngai na la ki lok bad kiba ithuh-ithaw. Te ha kata ka jaka u Khristan u la don ka jingsngewsih kaba ar ban, namar ba dei da ka jingpyni-buit jong u ba ki la poi sha kane ka lanot. 20

(b) Shisien uwei u ksew ynda u la ioh tuh doh masi na dukan diedoh u la rah ia ka ha shyntur. Ha ka lynti ba un leit sha iing u la dei ban ryngkang ia kawei ka wahduit kaba don ka jingkiengdieng na shiliang sha shiliang. Hamar ba u poi hapdeeng jingkieng u la iohi

ia uwei pat u ksew uba rah shilyngkhot ka doh kum ma u hi. Kumta u la kynrup ia uta, bad u la kum bret ia ka doh na ka shyntur. Kynrup ia ka syrngiew te duh noh ia ka met. 20

(c) Hadien khyndiat sngi u khun u Syiem u la kem ka pangkhlieh kaba jur haduh katta katta, bad u la ong ia u Mahet ban leit ialam kai ia ka Lukhimai sha sla ryngkew, namar ba ka la shu set kut than-eh ia lade la bun sngi hapoh iing. Ka Lukhimai bad u Mahet ki la iakling ban ym leit, namar kim sngewmon ban shu iehnoh ia u marwei hapoh hangta. Hynrei ynda u la pynbor eh ia ki, kim banse shuh bad ki la ia leit de baroh arngu. Ka Lukhimai ka la rah ia uta u mawlynnai ban plie ia kata ka pung. 20

# TRANSLATION FROM LUSHAI INTO ENGLISH

Paper-setter—REV. DAVID EDWARD, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate two only of the following passages into English:—

(a) Chutichuan Khawvêlthilafinga chuan 'Hemi khaw piahah hian khaw pakhat a hming Dánthaa a awm a ; chumi khusah chuan mi pakhat a hming Dáhríaa a awm. Amah chu mi fng tak mi tha tak a ni a, nangmah aig a, mi mangangte puih thiamah hiah a hmingthang hle a ni. Ka hriatah ngei pawh mi tam tak a tidam tawh a ni. Chung lo pawh chu ah phurrit tihdani dân pawh a thiam a ni. Ka sawi tawh angin a hnenah chuan i kal thei a, a lo pui thuai ang che. A in chu heta tang hiah mel khat pawh a tling mang lo ve, amah a lo awm leh loh fapa tiangvâl tha tak a nei a, a hming chu Dánthaduha a ni a, chu chuan pa ang baw chuan a thiam a ni. Chutah chuan i ritphurhah hiah hahdani a hmu aig. Tiin, in khaw lama hawn leh te i duh kher loh phei chuan i hupui leh i fate i chah aig a, in ruak pawh tam tak a awm a ni ; chung chu mai tlem tẽ tẽ in i luah thei ang. Eitur te pawh tlawn tak tha tak a ni a, chutahchuan nuamtakin i awm thei ang. Thenawmto pawh tha tak tak i nei ang a, dân tha tak neiin i awm ang' a ti-a. 20

(b) Choak pakhat hian, in ami hi eitur eng emaw a va ru a, a thlawh chhuahpui a, a kiah a thing zar ah chuan a fuk pui ta a. Chu chu sihal fng tak hian a lo hria a, a englo put chu ei a duh ta a, a va kal a, choak fukna thing bul ah chuan a thu a, a han en chho va, mak ti tak tak ang chuan, 'I va mawi tehlul em ! I hmul thianghlizia te nen chuan-in, hetiang thil mawi leh tha ka la hnui ngai lova, engtiza in nge i lo pian fuh fak chu ni ? Matherlovin i aw pawh a mawi ang. I aw mawizia hriat ka duh em em mai, hla i sak leh phei chuan in, i mawizia rong ah pawh nangmah aig chu sava reng reng he khawvel ah hian awm tawh chuagih ka ring lo' a ti a. Chutia a fak derna avang chuan choak a chu a lawin ta em em a. A lawm lutuk chu a tla dawn dawn ta mai a ; tin, sihal hnen ah chuan a hmel mawizia leh a aw mawizia a inang reng a ni tih hriattir a duh a, a hai ang a, ring takin a han hrām a, a eitur put lai chu a tla ta daih a, sihal chuan a la a, kār lovah a ei zo ta mai a, choak atzia chu a nuhsan a, a tlan leh ta daih a. 20

(c) Tiin, Ngaihsaki chuan 'Kawngah thil eng dang nge i la hmuh ?' a ti a, a zawt leh a. Tin, Kristiana chuan 'Thui lo tẽ ka kal latin Mi pakhat thinga thisen chhuaka inkhaih ka hmu a, chumi ka hmuh veleh chuan ka

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hnungzâng ata a phur rit a lum bo va ; chumi hma chuan rit tak phur a awm thin hi ka ni a, himahsela chutahchuan a lo tla ta mai a ni Tun hmain chuti ang thil te chu ka hmuh ngai loh avangin mak ka ti em em mai a ni. Tin, chutia chung lam en a ka diñ reng lai chuan mi pathum eng tak tak mai hi ka hnenah an lokal a ; pakhat chuan ka sualte chu ngaidam an ni tawh tih miñ hrilh a, tip, pakhat chuan ka puah a hlp a, hemi kawr mayi tak hi miñ hâk tir a ; tih, pakhat chuan ka chaleh chhinchhiaha min pe a, lekhabu pawh min pe baw a ni ' a ti a. 20

# TRANSLATION FROM GARO INTO ENGLISH

*Paper-setter*—MISS CHARLOTTE A. WRIGHT, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate *two* only of the following into English :—

(a) Badiaba mande Jerusalemoni Jerikoona ongonangengachim ; aro ua dokprete ragiparangni gisepe gaakaha. Uamang uni bararangko kikaha, aro uko sinasipile dokpretenba watangaha. Unon kakket makket, badiaba kanial ua ramako ongonangengachim ; aro uko nike gelangaha. Aro ugitan saksa Levi mandeba, ua biapona reangoa, uko nike gelangaha. Indiba Samariani badiaba mande unona sokoa, uko nike kasachakaha ; aro uona rebae uni parirango to aro draka bitchiko rudape uarangko kagopaha ; unikoa antang gakatgipani kosako uko asongate, aldaona rimbae uko sanaha. Aro uni salsao suki ronggniko bikote nok nokgipana one aganaha. Uko sanbo ; aro ondapgiminko pilbaon anga uko nangna onskagen. Naa badi ina, ia sakgitamoni sawa ua dokprete ragiparango gaakgipani songsul ongaha? Unon ua aganaha. Una kasachake dakgipa. Unon Jisu aganaha, Reangbo, naaba ua gitan dakbo. 20

(b) Ansenga ua mande,

Je papirangni kupatiao reruraja,  
Aro namigija dakronggiparangni ramao chadengja,  
Aro kalstapgiparangni asongchakanio asongja ;  
Indiba Jihovani niamo uni kasrokani onga,  
Aro uni niamko sal wal ua chanchibewala.  
Aro uan chiringrangni chisamo gegimin bol gita onngen,  
Je bol antangni kario bite nanga,  
Aro uni bijak sikrepja ;  
Aro ua jeko dakba uan silgen.  
Namigija dakgiparang indake ongja,  
Indiba balwana balponggiya bebu gita onga.  
Uni gimini namigijako dakgiparang bichalo,  
Aro papirang kakket dakgiparangni jinmao chadengjawa.  
Maina kakket dakgiparangni ramako Jihova uia ;  
Indiba papirangni rama gimagen. 20

(c) Uni gimini mandeni janggi tanganio pilak gamsengna bate somoian gamchatbata ine anching uina mana. Mandeni kandikgipa janggi tanganio chusokatgni kamrang bangoba una simsakjaode, mikka riprapana tarakbate katangenggiya somoide senghajawa. Jekai Napoleon Bonaparte changsao agilsak gimikko amgiya ongginokhim. Indiba uko dakchakgipa general minitchikung mangmang somoiko srappgijachin ua bobilchi sootako manaha. Somoia simsakgijachin skang chasongni Hindu rajarangba Musolman

rajarangchi Gnigipa Tellawari dakgrikao cheako manaha. Uni gimin somoina sjmsakgija dakara sikrepe aao gaakgipa bibalna kassanisan ongaia. Minitao chnsokatgniko minitgniona, salsaniko salgniona, bilsisao chusokgni kamko bilsigniona donaga beentangko maram chae gimaako namnikgipasan ongaia. 20

TRANSLATION FROM FRENCH INTO ENGLISH

*Paper-setter*—MR. NAGENDRANATH CHANDRA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following passages :—

(a) Amritsar se trouve à deux heures de chemin de fer de Lahore et nous arrivâmes dans cette dernière ville vers quatre heures de l'après-midi. Nous descendîmes dans un hôtel voisin de la gare, composé de petits pavillons d'une installation assez sommaire, mais où la nourriture était excellente. Lahore, capitale administrative du Punjab, compte 281,000 habitants et constitue un centre moderne d'études et aussi d'agitation antibritannique. La ville nouvelle s'étend sur un large espace, en dehors des ramparts de l'ancienne cité. Elle présente une série de grands édifices bâtis dans un style mi-hindou, mi-arabe. 20

(b) Nous employâmes le reste de l'après-midi à visiter New Delhi. C'est une curieuse ville en construction qui compte déjà 30,000 habitants. Elle se trouve située au sud-ouest de l'ancienne ville, aux confins des collines de Raisina et à plusieurs milles de la Jumna. L'idée de cette cité impériale, qui doit demeurer le monument éternel de la puissance britannique dans l'Inde et de son idéal, fut lancée, en 1911, au Durbar de Delhi par le roi Georges V, et c'est en 1913 que les plans furent définitivement arrêtés. Son étendue est plus que double de celle de la ville actuelle. Elle aura 135 kilomètres de rues, 115 kilomètres de cables électriques, et sa gare spéciale est déjà construite. 20

(c) Les Sikhs, comme je le croyais, n'appartiennent pas à une race spéciale, ce sont des hindous réformés, unis au sein d'une confrérie, la Khalsa, qui suit les enseignements d'un 'gourou' ou maître désigné. Le mot Sikh équivalait à disciple. Le fondateur de la secte, un nommé Nanak, mourut en 1538. Les Sikhs, de tempérament guerrier, résistèrent avec acharnement à la conquête musulmane. L'un de leurs chefs devint Maharadjah de Lahore. Après une lutte violente contre les Anglais, ils se rallièrent à la domination britannique, dont ils furent le plus ferme soutien au moment de la révolte des cipayes. Ils forment à l'heure actuelle quelques-uns des régiments de l'armée de l'Inde réputés parmi les meilleurs. 20

TRANSLATION FROM PORTUGUESE INTO ENGLISH

*Paper-setter*—DR. P. D. BRAGANCA CUNHA.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

(a) A nobreza de caracter é a perfeição e a gloria da vida. É o mais precioso dos bens ; o unico que, no conceito geral, supre a posição e a fortuna ;

o unico que ennobrece toda e qualquer carreira, e exalta todo e qualquer posto aos olhos da sociedade. A nobreza de caracter exerce maior poder que a riqueza, e, sem excitar as mesmas rivalidades que a fama, confere-nos as mesmas honras. Della resulta uma influencia sempre vivaz e sensivel, e com todo o direito, porquanto é a influencia da rectidão, da constancia, da honra provada, qualidades estas que, talvez mais do que nenhuma outra, conciliam a estima e a confiança dos homens. 20

(b) Rodeava o cemiterio um cordão de policia á cavallo, e dentro achavam-se alguns officiaes montados. Findos os funerais, o povo sentou-se em grupos na areia. Hafiz pode ouvir o solene cantico dos Fikeos, quando eles, desfilando as contas por entre os dedos, se dirigiam aos espiritos dos mortos. Alguns dos derviches dançavam, e algumas das mulheres balouçavam os corpos num movimento hipnotico, que parecia ter sobre elas o efeito dum estupefaciente. 20

(c) É a um antigo guerreiro do Norte que a fama attribue estas palavras judiciosissimas, nas quaes se revela tão profundamente o caracter da raça teutonica : 'Não creio em idolos nem em demonios, é unicamente na força do meu proprio corpo e na energia de minha propria alma que deposito toda a minha confiança.' O antigo elmo ornado de uma picareta com este mote : 'Se não achar caminho, abrirei um' offerece-nos uma expressão, não menos eloquente do que aquella outra, da vigorosa independencia por que se hão até hoje distinguido os descendentes dos homens do Norte. Na verdade, bem caracteristico é o facto de haver a mythologia scandinava armado o seu deus de um martello. 20

#### TRANSLATION FROM ORIYA INTO ENGLISH

*Paper-setter*—MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any TWO of the following passages :—

(a) ଅର୍ଯ୍ୟ ସତ୍ୟତାର ପ୍ରକୃତି କିନ୍ତୁ ସ୍ଥିର । ଏ ସତ୍ୟତାର କେନ୍ଦ୍ର ପଞ୍ଜୀ । ସହର ଯେ ଏ ଦେଶରେ ନାହିଁ ବା ନ ଥିଲା ତାହା ଅବଶ୍ୟ ନୁହେଁ, କିନ୍ତୁ ପଞ୍ଜୀର ରମଣୀୟ ପ୍ରକୃତି କୋଳରେ ଯେଉଁ ସତ୍ୟତା କାଳେ କାଳେ ବର୍ତ୍ତି ଅସୁଅଛି, ତାହାହିଁ ନାଗରଜୀବନକୁ ପ୍ରଭାବିତ କରୁ ଅଛି । ନାଗର ଜୀବନର ପ୍ରକୃତି ଓ ଗତି ଏ ଦେଶରେ କାଳେ କାଳେ ପଞ୍ଜୀ ଜୀବନ ଦ୍ଵାରା ନିୟମିତ ଓ ପରିଚାଳିତ ହୋଇଅଛି । ଜନପଦହିଁ ଅର୍ଯ୍ୟ ସତ୍ୟତାର ସ୍ଵର୍ଗ । ବିକାଶମୟ ସତ୍ୟତାର ପ୍ରଭାବ ଯେ ଏ ଦେଶରେ କେବେହେ ପଡ଼ି ନାହିଁ ତାହା ନୁହେଁ । କିନ୍ତୁ ଅର୍ଯ୍ୟ ଜୀବନରେ କୌଣସି ବିକାଶମୟ ସତ୍ୟତାର ଉପାଦାନ ସହରମୁଖରେ ଅସି ପଞ୍ଜୀ ଜୀବନରୁ

ସଦରକୁ ବଢ଼ିଲା ରଖି ନାହିଁ । ତାହା ଏଦେଶର ପ୍ରକୃତି ନୁହେଁ । ଅନ୍ୟ ସରକାର ପ୍ରଭୃତି ଯଦି କିଛି ଅଛି, ତାହା ଅନ୍ୟ ଶାବନର ଅଙ୍ଗୀକୃତ ହୋଇ ଆପଣାର ସତ୍ତ୍ୱ ହରାଇଅଛି ।

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(b) ଶ୍ରୀପୁରୁଷୋତ୍ତମ ଦେବ ଓଡ଼ିଶା ଗଙ୍ଗବଂଶର ଜଣେ ସୁପ୍ରସିଦ୍ଧ ରାଜା ଥିଲେ । ସେ କପିଳେନ୍ଦ୍ରଙ୍କ ପୁତ୍ର ଏବଂ ପ୍ରତାପରୁଦ୍ରଙ୍କ ପିତା । କିନ୍ତୁ ନିଜ ଗୁଣ ଓ କର୍ମବଳରେ ସେ ନିଜେ ବିଖ୍ୟାତ ଥିଲେ । ପ୍ରବାଦ ଅଛି ଜଗନ୍ନାଥ ଦେବଙ୍କ ସମ୍ମାନେଣ ଅନୁସାରେ ଅଠରୁ ଅଧିକ ମଧ୍ୟରୁ କପିଳେନ୍ଦ୍ର ପୁରୁଷୋତ୍ତମଙ୍କୁ ରାଜା କରି ଥିଲେ । ସେତେବେଳେ ଓଡ଼ିଶା ରାଜ୍ୟ ଗଙ୍ଗାମୁହାଣଠାରୁ ଗୋଦାବରୀ ଯାଏଁ ସୁବିସ୍ତୃତ ଥିଲା ଏବଂ ଓଡ଼ିଆ ସୈନ୍ୟ ଦାକ୍ଷିଣାତ୍ୟ ବିଜୟରେ ବ୍ୟାପ୍ତ ଥିଲେ । ଶୌର୍ଯ୍ୟ ଶାସ୍ତ୍ରୀ ବଦ୍ୟା ସକଳ ବିଷୟରେ ପୁରୁଷୋତ୍ତମ ଆପଣା ନାମକୁ ସାର୍ଥକ କରିଥିଲେ । ଇଷ୍ଟଦେବ ପ୍ରଭୁ ଜଗନ୍ନାଥଙ୍କ ଠାରେ ତାଙ୍କର ଅତଳା ଭକ୍ତି ଥିଲା ; ସେ ଦେବାଲୟ, ସେତୁ ଓ ଶାସନମାନ ବସାଇଥିଲେ । ନିଜେ ପ୍ରାକୃତ ଓ ସସ୍ତ୍ରୀୟ ଗୁଣରେ କେତେକ ଖଣି ପୁସ୍ତକ ରଚନା କରିଥିଲେ । ତାଙ୍କ ପରଶ ବର୍ଷ ରାଜତ୍ୱ ମଧ୍ୟରେ ଓଡ଼ିଶାର ସାହିତ୍ୟ, ରାଜନୀତି, ଧର୍ମନୀତି ପ୍ରଭୃତି ନାନା ବିଭାଗରେ ସେ ବହୁ ଭଦ୍ରତା ବ୍ୟାପନ କରିଥିଲେ ।

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(c) ସନ୍ନ୍ୟାସୀ ହିଁ ସାୟୁଦ୍ଧନ ସାୟୁକାଳରେ ଶିବମନ୍ଦିରରେ ସନ୍ନ୍ୟାସ ପ୍ରାପ୍ତ କରି ବକୁଳମୂଳରେ ଏକାକୀ ବସି ଅଛନ୍ତି, ଏହି ସମୟରେ ମୁଁ ଦୀର୍ଘ ପ୍ରବାସ ପରେ ନିଜ ପ୍ରାଣାୟୁକ ଗ୍ରାମସୀମାରେ ଉପନୀତ ହେଲି । ବୁଢ଼କୁ ଯିବା ପୂର୍ବେ ମହାଦେବ ମନ୍ଦିରରେ ପ୍ରଣାମ କରିବା ଆଶୟରେ ଘୋଷକରୁ ଓଢ଼ାଇ ନଦୀ ଜଳରେ ଶରୀର ଶୋଧି ବ୍ୟାଧନ କରି ମନ୍ଦିର ଆଡ଼କୁ ଅଗ୍ରସର ହୋଇ ନାନା ପୁଣ୍ୟ ସ୍ଥଳ ବିଜିତ ସେହି ବକୁଳମୂଳରେ ସଦୃଶ ମୋର ଶାବନରକ୍ଷକ ସେହି ସନ୍ନ୍ୟାସୀଙ୍କୁ ଆସୀନ ଦେଖି ଆନନ୍ଦରେ ନିମଗ୍ନ ହୋଇ ତାଙ୍କର ଚରଣ ବନ୍ଦନା କଲି । ସନ୍ନ୍ୟାସୀ ବାସୁଦେବଙ୍କାରେ ମୋତେ ଆଶୀର୍ବାଦ କରି କହିଲେ “ବସୁ ଦେବ-ବନ୍ଦନା କରି ଆସ ।” ମୁଁ ମନ୍ଦିରରେ ପ୍ରଣାମ କରି ପୁଣି ତାଙ୍କ ନିକଟରେ

ଉପସ୍ଥିତ ହେଲି । ସନ୍ଧ୍ୟାସୀ ମୋତେ ନିକଟରେ ବସାଇ କହିଲେ  
 “ ବନ୍ଧୁ, ତୁମ୍ଭେ ହୃଦୟର ଅକାଂକ୍ଷା ମୁଁ ବୁଝି ପାରି ଅଛି, କିନ୍ତୁ ତାହା  
 ଇହଲୋକରେ ପୂର୍ଣ୍ଣ ହେବାର ସମ୍ଭାବନା ବହୁ ନାହିଁ । ” ଏହା କହି  
 ହେମମାଳାର ପୀଡ଼ାର ବୃତ୍ତାନ୍ତ ମୋତେ ଜଣାଇଲେ ।

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### TRANSLATION FROM KANARESE INTO ENGLISH

Paper-setter—MR. P. APPAJI RAO, B.Sc.

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

Translate any TWO of the following passages into English:—

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(a) ಭରତನು ଐದು ମಂದି ଯୌଦ୍ଧରನ್ನು କ୍ଷଣମାତ୍ରದಲ್ಲಿ କରୈସି  
 ରାମନ ବଞ୍ଚିଥିଲେ ନିଶ୍ଚୟ, ଶ୍ରୀ ରାମନୁ ଅବରନ୍ତୁ କୁରିତୁ, “ ନିଶ୍ଚୟ  
 ଲକ୍ଷ୍ମଣନ ସମୀପକୁ ଯୋଗି, ‘ ଏହି ଲକ୍ଷ୍ମଣନେ ! ଯୁଦ୍ଧରେ ଏ ବାଳ  
 କରୁଥିବୁ, ଜୀବନ୍ତରାଗିରୁବନ୍ତେ ସମ୍ମୋହନାସ୍ତ୍ରପନ୍ଥା ପ୍ରୟୋ  
 ଗିସି ସୌଧତରନ୍ନାଗି ମାଡି, ଅବରୁ ଅପରାଧିଗାଗିଦ୍ଵରା, ଅବରନ୍ତୁ  
 ରକ୍ଷିତଦେବୁ. ନିଶ୍ଚୟ ଶୌରନ୍ତେ ସମ୍ମୁଖନ୍ତେ ରଥାରୋହନ୍ତେ ସର୍ବା  
 ସ୍ତ୍ରୀକୌ ବିଦରାଦ ଶୌରନ୍ତେ କୋଡିଦବନ୍ତେ ଅଗିଦ୍ଵିୟେ. ଏ କୁମାରରୁ  
 ବିରଥରୁ, ଅତ୍ରୟରହିତରୁ. ମହାକୌ ଅବରୁଥିବୁରନ୍ତେ ଯୁଦ୍ଧରେ  
 କେତେକେ ଦୈଗନେ ଉଲ୍ଲଗି କରୁକୌନ୍ତେ ବା. ଅନ୍ତର ମହାକୌ ଯାରୁ  
 ଦୟାୟନ୍ତେ ମନଃପୁରାଣକାଗି ତୌରିସବନ୍ତେ ଅନ୍ତେକ ସାଧୁଗରୁ  
 ଶୌକରେ ପୁତ୍ରପୁତ୍ରସହିତରାଗିରୁବରୁ. ଭୌମିୟରେ ଯୁଦ୍ଧରେ  
 ନାନୁ ସିତେୟ ମୁଖିକୌ ସଦୃଶବାଦ ମୁଖିପୁରୁ, ମୁଗନ ମୁଖିବନ୍ତେ  
 ନୌଡ଼ଲି. ଅଦକାରଣ ଅବରୁଥିବୁରନ୍ତେ ନାନୁ ଯିତିସୁତ୍ତେନେ. ଅବରୁ

ಯಾರ ಮಕ್ಕಳು? ಎತಕ್ಕಾಗಿ ವನಸಂಚಾರ ಮಾಡುತ್ತಿರುವರು? ಅವರ ತಾಯಿಯಲ್ಲಿರುವವಳು ಎಂಬುದನ್ನು ಕೇಳಿ ಆಕೆಯನ್ನೂ ಅವರನ್ನೂ ಕರೆದುಕೊಂಡು ಬಾ' ಎಂದು ನಾನು ಹೇಳಿದನೇತದು ಆತನಿಗೆ ತಿಳಿಸಿರಿ" ಎಂದನು.

(b) ನಮ್ಮ ಆಯುರ್ವೇದ ಶಾಸ್ತ್ರದಲ್ಲಿ ವೋಕ್ಷಸಾಧನವಾದ ಮಾನವ ಶರೀರವನ್ನು ಆರೋಗ್ಯಸ್ಥಿತಿಯಲ್ಲಿ ಕಾಪಾಡಿಕೊಳ್ಳುವುದಕ್ಕಾಗಿ ಅನುಸರಿಸಬೇಕಾದ ಆರೋಗ್ಯಸೂತ್ರಗಳು ಹೇರಳವಾಗಿವೆ. ಭಾರತೀಯರ ಆಚಾರಗಳೆಲ್ಲವೂ ಆರೋಗ್ಯಕ್ಕೆ ಸಂಬಂಧವಾದುವು. ಎಂಜಲು ಮಾಡಬೇಡವೆಂದು ಮಕ್ಕಳಿಗೆ ಹೇಳಿ ಕೊಡುತ್ತೇನೆ, ಉಗುರುಗಳನ್ನು ಕಡಿಯ ಕೂಡದೆಂದು ಹೇಳುತ್ತೇನೆ, ಕಂಡಕಡೆ ಉಗುಳಕೂಡದೆಂದೂ, ಹೇಸಿಗೆ ಮಾಡಕೂಡದೆಂದೂ, ಮಲಮೂತ್ರಗಳ ವಿಸರ್ಜನೆಯಾದನಂತರ ಪ್ರಕ್ಷಾಲನಮಾಡಿಕೊಳ್ಳಬೇಕೆಂದೂ, ಮಾರ್ಕಟ್ಟಿನಲ್ಲಿ ತರಕಾರಿಯನ್ನು ಕೊಂಡು ಅದನ್ನು ಮನೆಗೆ ತಂದೊಡನೆಯೇ ಶುಭ್ರವಾದ ನೀರಿನಲ್ಲಿ ಚೆನ್ನಾಗಿ ತೊಳೆದು ಉಗ್ರಾಣದಲ್ಲಿಡಬೇಕೆಂದೂ, ಹೊರಗೆ ಹೋಗಿ ಸುತ್ತಿಕೊಂಡು ಬಂದರೆ ಕಾಲುಗಳನ್ನು ತೊಳೆದುಕೊಂಡು ಕೋಣೆಯೊಳಕ್ಕೆ ಹೋಗಬೇಕೆಂದೂ ಒಬ್ಬನು ಎಂಜಲು ಮಾಡಿದ ಲೋಟಾವನ್ನು ಮತ್ತೊಬ್ಬನು ಚೆನ್ನಾಗಿ ತೊಳೆಯದೆ ಉಪಯೋಗಿಸಕೂಡದೆಂದೂ, ರೋಗಿಯನ್ನು ಮುಟ್ಟಿದರೆ ಕೈತೊಳೆದುಕೊಳ್ಳಬೇಕೆಂದೂ, ಮದ್ಯವನ್ನು ಸೇವಿಸಕೂಡದೆಂದೂ ಹೇಳುತ್ತೇವಷ್ಟೆ! ಆದರೆ, ಈ ನಿಯಮಗಳನ್ನು ಉಲ್ಲಂಘಿಸುವುದರಿಂದ ಆಗುವ ಕೆಡಕನ್ನು ನಾವು ಜನಗಳಿಗೆ ತಕ್ಕ ರೀತಿಯಲ್ಲಿ ತಿಳಿಸುವುದಿಲ್ಲ ಇದನ್ನು ನಾಟಕರೂಪದಲ್ಲಿ ತಿಳಿಸಿದರೆ ಜನರಲ್ಲಿ ಜ್ಞಾನೋದಯವೂ ಆರೋಗ್ಯವಿಷಯದಲ್ಲಿ ಎಚ್ಚರಿಕೆಯೂ ಉಂಟಾಗಿ, ಸದಾ ಜಾರದಿಂದ ಅವರ ಆರೋಗ್ಯವು ಮೇಲಾಗುವುದರಲ್ಲಿ ಸಂಶಯವಿಲ್ಲ

(c) ಇನ್ನು ಮುಂದೆ ಬ್ರಿಟಿಷ್ ಸರಕಾರದಲ್ಲಿಯೂ ದೇಶೀಯಸಂಸ್ಥಾನಗಳಲ್ಲಿಯೂ ಹೊಸ ಸುಧಾರಣೆಗಳಾಗಿ ರಾಜ್ಯಭಾರ ಕ್ರಮಗಳು ಮಾವಣು ತ್ತಿರುವುನೆಂಬುದು ನಮಗೆ ತಿಳಿದ ವಿಷಯ ಹೊಸ ಸುಧಾರಣೆಯ ರಾಜ್ಯಭಾರದಲ್ಲಿ ಇತರ ಪ್ರಾಂತಗಳಿಗೂ ಅವುಗಳ ಭಾಷೆಗಳಿಗೂ ಸಲ್ಲಿವ ಅನುಕೂಲಗಳು ನಮಗೂ ನಮ್ಮ ಭಾಷೆಗೂ ಸಲ್ಲಿವ ಅವಕಾಶವಿರುವುದೇ? ಅಂತಹ ಅನುಕೂಲಗಳನ್ನು ಪಡೆಯಲಿಕ್ಕೆ ಈಗ ನಾವು ಮಾಡಿಕೊಳ್ಳತಕ್ಕ ಪೂರ್ವಸಿದ್ಧತೆಯೇನು? ಈ ಪ್ರಶ್ನೆಯೇ ಸದ್ಯದಲ್ಲಿ ನಮ್ಮ ಮುಂದಿರುವುದು. ಕರ್ಣಾಟಕ ಪ್ರಾಂತರಚನೆಗಾಗಿ ಕನ್ನಡಿಗರಿಗೊಂದು ಸ್ವತಂತ್ರ ವಿಶ್ವವಿದ್ಯಾಲಯವಾದರೆ ಸಾಕೆಂದು ಹಲವರ ಅಭಿಪ್ರಾಯ. ಇದು ಶೀಘ್ರದಲ್ಲಿ ಸಫಲವಾಗಲಾರದೆಂಬುದೂ ಈಗಿನ ಪರಿಸ್ಥಿತಿಯ ಮೂಲಕ ನಮಗೆ ಗೊತ್ತಾಗುತ್ತಿರುವುದು. ಹೀಗೆಂದು ನಾವು ನಿರಾಶೆಯಿಂದ ಸುಮ್ಮನೆ ಕುಳಿತುಕೊಳ್ಳಲಿಕ್ಕಿಲ್ಲ ಬರುವಂತಿಲ್ಲ. ನಮಗೆ ಅನುಕೂಲವನ್ನಂಟುಮಾಡುವ ಕಾರ್ಯಗಳಲ್ಲಿ ಮುಂದುವರಿಯಬೇಕಾಗಿದೆ. ಪರಿಷತ್ತು ಸಮ್ಮೇಳನಗಳಲ್ಲಿಯೂ ತನ್ನ ವಾರ್ಷಿಕಾಧಿವೇಶನಗಳಲ್ಲಿಯೂ ನಿರ್ಣಯಿಸಿದ ಗೊತ್ತುವಳಿಗಳನ್ನೆಲ್ಲಾ ಕಾರ್ಯರೂಪದಲ್ಲಿ ತರುವುದೇನೋ ವಿಹಿತವೆ. ಆದರೆ ಹಾಗೆ ಮಾಡಬೇಕಾದರೆ ಮೇಲೆ ಹೇಳಿದಂತೆ ಜನಧನಸಹಾಯವು ಸಾಕಾದಷ್ಟಿರಬೇಕು. ಪರಿಷತ್ತು ಈಗ ತನಗಿರುವ ಜನಧನಸಹಾಯಕ್ಕೆ ತಕ್ಕಂತೆ, ಸದ್ಯದ ಪರಿಸ್ಥಿತಿಗೆ ಯಾವುದು ಮುಖ್ಯವೋ ಅಂತಹ ಒಂದೆರಡು ವಿಷಯಗಳನ್ನು ಕಾರ್ಯರೂಪದಲ್ಲಿ ತರುವುದಕ್ಕೆ ವರ್ಷಾವಧಿ ದುಡಿಯುವುದೇ ಮುಖ್ಯಪ್ರಯೋಜನವೆಂದು ನನ್ನ ಭಾವನೆ. ಅಂತಹ ಕಾರ್ಯಗಳು ಯಾವುವೆಂಬುದನ್ನು ನಿರ್ಣಯಿಸುವುದು ತಮ್ಮೆಲ್ಲರ ವಿಚಾರಕ್ಕೊಳಪಟ್ಟಿರುವುದು.

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## TRANSLATION FROM GUJRATI INTO ENGLISH

*Paper-setter*—DR. I. J. S. TARAPOREWALLA, B.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English two of the following passages :—

(a) જેપાનના સુપ્રસિદ્ધ યોધા એડમીરલ ટોગો ૮૭ વરસની પુખ્ત વયે સ્વર્ગવાસ થવાના સમાચાર મળ્યા છે. જેપાનના આ ‘ગ્રાન્ડ ઓલ્ડ મેન’ ૧૬ વરસની નાની વયથી જેપાનીસ દરિયાઈ કાફલામાં ખલાસી તરીકે જોડાયા હતા. તેઓ ભારે ખંતીલા, હોંશીલા તથા હિમ્મતવાન હતા; અને ટુંક મુદતમાં દરિયાવર્ધી ખાતાંની બાબદમાં માહિતગારી મેળવીને તેમણે કાફલાના એના અમલદારની પદવી પ્રાપ્ત કરી હતી. ૧૯૦૫ની સાલમાં રસો-જેપાનીસ જંગ વખતે તેઓએ જે અસાધારણ જીતો મેળવી હતી તેથી દુન્યાભરમાં તેઓ પ્રખ્યાત થઈ ગયા હતા. ત્થુશીમા ખાતે રશીયન કાફલાને તેઓએ જબરદસ્ત શીકસ્ત આપી મારી હઠાવ્યો હતો અને પોર્ટ આર્થર તથા ત્થુશીમાના યોધા તરીકે જંગ જાહેર થયા હતા.

તેઓની આ ફતેહથી જેપાન માત્ર આફતમાંથી સહીસલામત બચવા પામ્યું એટલુંજ નહીં પણ જેપાનીસ કાફલાના બળ માટે સર્વત્ર માન ફેલાયું હતું.

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(b) બિહારમાં છેલ્લા ધરતીકંપ પછી કેટલેક ઠેકાણે જમીનમાંથી જુદી જાતની માટી નીકળવાની ખબર બહાર પડી છે. ક્યાંય ક્યાંય માટીમાં સોનું મળેલું હોવાની વાત પણ બહાર આવી છે.

પરંતુ જમીનમાંથી દોલત મળવાનો આ કંઈ પહેલોજ દાખલો નથી. ધરતીકંપના આગલા ઇતિહાસો જોવાથી જણાય છે કે ધરતીકંપ વખતે



અનેકવાર પૃથ્વીમાંથી ધન દોલત નીકળી પડે છે. મેલબોર્નના વુડફોર્ડમાં એક વખત ધરતીકંપ થયા બાદ, બે છોકરાઓ એક ટુકાણેથી ૧૦૩ પૈડાના સિકકા ખીસામાં ભરીને ઘેર આવ્યા. છોકરાઓના બાપે તે વિષે પુછ પરછ કરતાં તેમણે જણાવ્યું કે તે ધરતીકંપને લીધે જમીનમાં પડેલી ફાટોમાંથી મળી આવ્યા હતા. આ ઉપરથી છોકરાઓનો બાપ ત્યાં ગયો હતો અને ત્યાંની જમીન ખોદતાં તેને મોટી દોલત મળી આવી હતી.

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(c) બંગાલના રાધાનગર ગામમાં જન્મેલા બંગાલી સુધારક રાજ રામ મોહનરાયે અનેક દુઃખો સહન કરીને બંગાલના હીંદુઓનાં લલા અર્થે જે પરોપકારી કામો કર્યા છે તે વખાણને પાત્ર છે. નાની વયે સંસ્કૃત, ફારસી અને અરેબીક ભાષાઓનો અભ્યાસ કરી અનેક ધાર્મિક પુસ્તકો વાંચીને તેઓએ હીંદુ રીત-રીવાજો તરફ અણગમો દેખાડવા માંડ્યો જેથી તેમને બાપીકું ધર છોડી જવાને ફરજ પડી. પિતાના મરણ પછી તેમને પિતાની મીલકતનો કાંઈ પણ ભાગ મળ્યો નહીં, કારણ કે તેમના સુધારાવાળા વિચારો માટે તેમની માતા અને તેમનાં સર્વે સગાં-વહાલાંઓ તેઓને ધિક્કારતાં રહ્યાં. યોગ્ય સુધારા દાખલા કરાવવાને તથા લોકોમાંથી અધિકાર દૂર કરી જ્ઞાનનો પ્રકાશ ફેલાવવાને તેઓએ કલકત્તા મધ્યે યોગ્ય તજવીજો ચાલુ રાખી અને “આત્મીય સભા” નામની સંસ્થા સ્થાપી તથા એક કોલેજ પણ ઉભી કરાવી. સતી થવાના ખોટા રીવાજ વિષે તેઓએ ભાષણો કરવા માંડ્યાં તથા લેખો લખવાને શરૂ કર્યા અને જુના વિચારવાલાઓને સમજાવવા સારૂ કાંઈએ બાકી રાખ્યું નહીં.

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TRANSLATION FROM TELUGU INTO ENGLISH

Paper-setter—DR. B. RAMCHANDRA RAU, M.A., PH.D.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate any two of the following passages into idiomatic English :—

(a) నేను మాతల్లిదండ్రుల కేక పుత్రుడను. మాతల్లికి నాపైగల ప్రేమకు మితీలేదు; నేనొక్క నిమిష మామెకు గనబడకుండుచో నామె విలలించును. అంత ప్రేమ నాపై మాతండ్రిగారికిని గలదుగాని యట్లున్నట్లు కనబడకుండుటకై యత్నింతురు; ఎవ్వరికే పదార్థముపై సత్యంత ప్రేమ కలుగునో యద్దానికే భంగము కలుగుచుండునని మాతల్లితోఁ జెప్పుచుందురు: వారి శ్రద్ధను, ప్రేమను, ప్రేమాపర రూపమగు భక్తిని, ధర్మదార్థము పైననే నిల్పుటచే దేవుని మఱతురనియు భగవంతుడు వారలచే దనను స్మరింప జేయుటకై తత్పదార్థమును దనలో గల్పుకొనుచుండుననియు బోధించుచుందురు. దానికి గారణమిది. నా పితరులకు నా పూర్వము జన్మించిన ముగ్గురు పుత్రులును నైదేండ్లు నిండక పూర్వమే యీశ్వర సాన్నిధ్యము నొందిరట. నాకైదవ యేటనే విద్యాభ్యాసము గావించిరి.

“వీని కిప్పటినుండియు జదువేల? ఉల్లాసముగ దిరుగుచుండ నీయక” అని మా తల్లి యనెడిది కారి విద్యావిహీనుడగు పుత్రు డుండుట కంటె సరితెలియే లేకుండుట మేలని మా తండ్రిగారు చెప్పుదురు. నాపైగల యనురాగముచేతను, వీధిలో నాకేమి యాపద వచ్చునో యను భయముచేతను నన్ను ఇల్లు కదలి వెళ్లనిచ్చెడు వారు కారు.

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(b) అట్లు వికల హృదయుడనై రాత్రియంతయు గడిపితిని. కాకులు కూయుటతోడనే మెలకువ వచ్చెను గాని పరుపు మీద నుండి లేవలేక పరుంటిని. కాని యప్పుడే మా యావు ఈనినదని కేకలు విసబడుటచే లేగ చూడను జూచు నుత్సాహముతో లేచి తిని. ఆ యావును నాలుగు దినముల క్రిందటనే మా యూరు సంతలో గొంటిమి. కొనిన నచిర కాలములోనే యీనుటచే మాకందఱకు నానందమయ్యెను. నేను పెరటిలోనికి వెళ్లన ప్పటికి నల్లని కోడిదూడ గంతులు వేయుచుండెను. ఆ యుద యము చాలభాగము పెరటిలోనే కూర్చుండి యుంటిని. ఆ వునకు నేనే దగ్గఱనుండి కుంచెడు ధాన్యము దంపించి పెట్టించి తిని. అది మాయ తినకుండ నుండునట్లు చూచుచుంటిని. ఆ సందడి వలన నా మనోవ్యాధిని గొంత మఱచితిని. నేను పది గంటలకు భోజనము చేయుచున్నప్పుడు మా తండ్రిగారు “ఏమి రా! నాయనా! నిన్న నీ యొంటిలో బాగుండలేదట. ఇప్పుడు కులాసాగ నున్నదా” యని యడిగిరి. “కులాసగనే యున్నది; దేహములో నేమియు లే” దని నేను జవాబు చెప్పితిని. వంట

యింటి గుమ్మము వెలుపల వసారాలో గూర్చుండి యున్న నా నెచ్చెలి యచ్చటి నుండియే “జన్ను పెట్టరేమో యను భయము చేత నట్లనుచున్నారు గాని, నిజముగ నిన్న జిద్దకముగనే యున్నారు” అనెను.

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(c). నా ప్రియ సఖి విఘ్నేశ్వరునకు జేసిన పూజయు నే మ్రొక్కుకొనిన మ్రొక్కును నూరక పోలేదు. ఇట్టి సంకుచి తారా ధనలకే యభీష్టము లొసంగు దైవ మింకెవరును నాకు గనబడలేదు. ఈయనను విఘ్ననాయకుడనియు దెనుగున బనిచెరుపుల దొరయనియు వర్ణింతురు. ఏ కార్యములందు విఘ్నములు కల్పించెనో యెవరి పనులు చెరిపెనో యెవ్వరును జెప్పరు. ఈయనను బ్రార్థించుట “నాకెద్దరుగ రావలదని” నంబి వానిని బ్రార్థించినట్టలా? విఘ్నములు స్వేయుట యీయనకు సహజమును అది చేయకుండుటే యీయన చేయు నుపకారమునా? లేదా, ఈయన మనకు మన కార్యములందు దోడ్పడి యే కారణముచేనైన వచ్చు విఘ్నములను బారదోలునా? అనగా, మృత్యువునకు జ్వరవాతాదులు పరివారమైనట్లు విఘ్నము లీతని పరివారమా, లేక జ్వరవాతాదులును ఓషధులు పోగొట్టినట్లు విఘ్నములు నితడు పోగొట్టినా? మీరేమనినను నే చిన్న నాటనుండి పూజించు దేవుని గార్యసిద్ధి చేయు దైవముగ భావించును గాని విఘ్నములు కలుగ జేయు స్వభావము గాని శక్తిగాని గల్గిన ఘాతకునిగ నేంచను.

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## TRANSLATION FROM TAMIL INTO ENGLISH

Paper-setter—M. M. VEDANTAVISARAD N. S. ANANTAKRISHNA SASTRI.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Translate any two of the following passages :—

(a) பாலர்களே! நீங்கள் கதை கேட்பதில் மிக விருப்பமுடையவர் என்பதை யானறிவேன். குழந்தைப் பருவத்தில் நீங்கள் உணவு கொள்ள மறுத்தபோது உமது பெற்றோர் கதை சொல்லித்தேற்றி உண்பித்தினரல்லவா? சாவகாசமானகாலங்களில் உமது தாத்தா பாட்டி முதலிய வயதுமுதிர்ந்தவர்களும் உமக்குக் கதைகள் கூறியிருப்பார்கள். ஆயினும் சாமான்ய மனிதர்களது கதைகளைக் கேட்பதிலும் கடவுளது கதையைக் கேட்பது மிகவும் நல்லது. பிறநாட்டில் கடவுளது லீலைகளைப்பற்றிய கதைகளிலும் நம்நாட்டில் கூறப்பட்டுள்ளவை படிப்பதற்கினிமையாகவும் பல நன்மைகளை அளிப்பனவாகவு மிருக்கின்றன.

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(b) மகாவிஷ்ணு உலகத்தை ரக்ஷிக்கும் பொருட்டு பத்துத் தடவை உலகில் அவதரித்தார். இவற்றுள் கண்ணன்பிரானைப் பற்றிய கதைகள் மிக இனிமையானவை. கண்ணன் மகிமைக்கு இளங்காதவர் எவருமில்லை. கண்ணன் இவ்வுலகத்தில் தோன்றி பல திருவிளையாடல்கள் செய்திருக்கிறார் அவற்றைக் கேட்க மிக ஆனந்தமுண்டாகும். இவர் பிறப்பினால் நமது இந்து தேசம் அதிலும் மதுரா பிருந்தாவனமும் மிகவும் பவித்திரமானது. மதுரை என்ற மாநகரத்தைத் தலைநகராகக் கொண்டு சூரசேனன் என ஓர் அரசன் ஆண்டுவந்தார்.

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(c) கோசலத்தில் ரோஹிணி புதல்வனாகிய ராமனும் யசோதா பாலனாகிய கிருஷ்ணனும் பலவித விளையாடல்கள் புரிந்து யாவரையும் மகிழ்வித்து வந்தனர். கண்ணன் கோபர்களது வீடுகளுக்குச் சென்று அங்கு கறந்து வைத்திருக்கும் பாலைக் கொட்டி விடுவான். சிலவீடுகளில், பால் கறப்பதற்கு முன்னமே கன்றுகளை அவிழ்த்துவிடுவான். கோபிகைகள் வந்து பார்க்கும்பொழுது எங்கேயாவது பதுக்கிக்கொள்வான். உறியிலிருக்கும் வெண்ணைத்தாழிகளை யொடைத்துவிடுவான். தான் உண்டது போக மீதி இருப்பதைப் பூனைகளுக்கும் வெளியிலிருக்கும் குரங்குகளுக்கும் கொடுப்பான்.

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## TRANSLATION FROM MALAYALAM INTO ENGLISH

*Paper-setter*—RAO BAHADUR L. K. ANANTAKRISHNA IYER, B.A., L.T.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

(a) ക്ഷമാഗ്രണം സമ്പാദിക്കുന്നതിന്നു പലവഴികൾ ഉണ്ടു്. അവയിൽ ഒട്ടും അപ്രധാനമല്ലാത്ത ഒന്നു സഹജീവികളെ സ്നേഹിച്ചു തുടങ്ങുകയാകുന്നു. സഹോദരന്മാരെ പോലെ തന്നെ സകല ജീവികളേയും സ്നേഹിക്കണം. ഇതു കൂടാതെ ക്ഷമാഗ്രണം സമ്പാദിക്കുവാനുള്ള വഴി വിവേകത്തെ വളർത്തുകയാകുന്നു. കോപം വരുമ്പൊൾ പത്തുവരെ എണ്ണുക എന്നുള്ള പഴമൊഴി സൂചിപ്പിക്കുന്നതു.

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(b) നമ്മുടെ ശരീര രക്ഷക്കു വളരെ ഉപയോഗമായ സാധനങ്ങൾ പലമൂലങ്ങൾ വളരെ ഉണ്ടു്. അവയിൽ പ്രധാനമായവ സസ്യങ്ങൾ ആകുന്നു.

സസ്യങ്ങളുടെ എല്ലാ അവയവങ്ങൾക്കും ഓരൊ പ്രത്യേക ജോലിയുണ്ടു്. നമ്മുടെ ആഹാരവിഷയത്തിൽ കൈ, വായി, വയറു എന്നിവയാണല്ലോ ഓരൊ പ്ര



(b) လောက၌လူတို့သည်ဥစ္စာပစ္စည်းပေါများချမ်းသာကြရန်၊ တနေ့တနာရီခန့်မျှအနာမပေးဘဲထုပ်ကိုင်ရှာထွေရဆောင်း၍နေကြလေသည်မှာ၊ ၎င်းဥစ္စာဓနတို့သည်ပိုင်ဆိုင်သူဥစ္စာရှင်၏ကို၊ ကာယသုခ၊ ဓိတ္တသုခတို့ကိုဖြစ်ထွန်းစေခြင်းကြောင့်ဖြစ်လေသည်။ ဓနသည်မှန်ကန်စွာသုံးတတ်မှု၊ လူတို့တွင်အားကိုးမရှိသောလက်နက်ကြီးလည်းမည်၏။ ရန်သူတို့ကိုကွယ်ကာနိုင်သောခံတပ်ကြီးလည်းမည်၏။ အကျိုးကိုဆောင်တတ်သောမိတ်ဆွေကောင်းလည်းမည်၏။ မိဘဆွေမျိုးသားခြင်းလည်းမည်၏။ ယုံကြည်မိတ်ချရသောကျွန်ကြီးလည်းမည်ပါပေ၏။ ဥစ္စာပစ္စည်းသည်မချစ်ခင်သူတို့ကိုချစ်ခင်အောင်ပြုလုပ်နိုင်၏တဦးတယောက်မျှမထုပ်ကိုင်ခြင်းသောအထုပ်ကိုဥစ္စာဓနဖြင့်မှိုင်းစေပါကခဏခြင်းဖြင့်ပြီးစီးနိုင်၏။

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(c) တောလက်ကျေးရွာတို့သို့ခေတ္တခဏသွားရောက်သူများသည်မိတ်ခြံခြင်းကိုရသည်သာမက၊ ကျေးလက်၌နေထိုင်သူတို့၏စကားပြောဆိုဟန်နှင့်ဝတ်စားတန်ဆာဝတ်ဆင်မှုများသည် မြို့နှင့်ကွဲပြားခြားနားသည်ကိုတွေ့မြင်ရသေးသည်။ တောရွာများ၏တည်ထောင်ဟန်ပုံသဏ္ဌာန်မှာ၊ မျက်နှာချင်းဆိုင်အိမ်တန်းနှစ်တန်း၏အကြားတရှောက်သည်လူအများသွားလာရန်သမ်းဖြစ်၏။ ရှေးအထက်ကျော်ကာလကသားရဲတို့ဘေး၊ မိုးသူခါးပြတိုဘေးမှထွတ်ကင်းစေရန်တပ်ကာရံခြင်းအလေ့အထသည်ယခုထက်တိုင်ရှိသည်။ ရွာသားထူသမျှတို့သည်အလှည့်ကျညဉ့်အခါကင်းစောင့်ကြရ၏။ ရွာသူရွာသားတို့တွင်ရွာသူကြီးသည်အကြီးအမှူးဖြစ်၍အထူးအာဏာရရှိမှု၊ သေးနပ်သောအမှုများကိုစီရင်ဆုံးဖြတ်နိုင်၏။ ရွာသူရွာသားတို့သည်၊ ထယ်ယာထုပ်ကိုင်စားသောရသူများဖြစ်သည်နှင့်အညီ၊ စပါးပျေးဆံပျေးအတက်အကျကိုတိုင်ပင်ပြောဆိုလျက်နေထေ့များသည်။

20.



## TRANSLATION FROM MODERN TIBETAN INTO ENGLISH

Paper-setter—DR. SATKARI MOOKERJEE, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any TWO of the following passages :—

1. (a) ལལ་ཆེ་མ་གཙོད་ཅིག། དེ་ནས་ཁྱོད་རྣམས་ཀྱི་ལལ་ཆེ་གཙོད་པར་མི་འགྱུར་  
 རོ། ཇི་བཞིན་དུ་ཁྱོད་ཚོས་ལལ་ཆེ་གཙོད་པ་དེ་བཞིན་དུ་ཁྱོད་རྣམས་ཀྱི་ལལ་ཆེ་ཡང་གཙོད་པར་  
 འགྱུར་རོ། ཡང་ཁྱོད་ཚོས་གང་གིས་འཇུག་པ་དེས་ཁྱོད་རྣམས་ལ་ཡང་འཇུག་པར་འགྱུར་  
 རོ། ཁྱོད་ཀྱིས་རང་གི་སྤྱན་གྱི་མིག་ལ་ཡོད་པའི་སྤྱར་མ་ཞིག་མཐོང་ཡང་། རང་གི་མིག་ལ་  
 ཡོད་པའི་གདུང་མ་དེ་ཅི་ལ་མི་མཐོང་། ཡང་ན་ཁྱོད་རང་གི་མིག་ལ་གདུང་མ་ཞིག་ཡོད་དེ།  
 ཁྱོད་ཀྱིས་རང་གི་སྤྱན་ལ། ངས་ཁྱོད་ཀྱི་མིག་ལ་ཡོད་པའི་སྤྱར་མ་དེ་འདྲོན་པར་བྱའོ་ཞེས་ཅི་  
 ལ་ཟེར། ཁ་ཚོས་མཁན་ཡོད། སྤྱན་ལ་རང་གི་མིག་ལ་ཡོད་པའི་གདུང་མ་དེ་ཐོན་ཅིག། དེ་  
 ནས་ཁྱོད་ཀྱིས་རང་གི་སྤྱན་གྱི་མིག་ལ་ཡོད་པའི་སྤྱར་མ་དེ་གསལ་པོར་མཐོང་ཉེ་གཏོན་བྱལ་  
 ཡོད།

20

(b) དེ་ནས་ཁོང་གིས་མི་འཛོགས་རྣམས་གཟིགས་དེ། རི་ལ་ཕྱོད་པས་ནས་བཞུགས་  
 པ་ལས། ཉེ་གནས་རྣམས་ཁོང་གི་སྒྲི་མདུན་དུ་ཡོངས་པ་དང་། ཁོང་གིས་ལལ་ཕྱིས་དེ་དེ་  
 དག་ལ་ཚོས་བཞུན་ཅིང་གསུངས་པ།





(b) Լուստուրը մեծամեծ շահեր է բերում և Կոր-  
 թուղան հարստանում է շատ արագ: Հազուադիւս չեն այն  
 դէպքերը երբ երեկուայ մագործն այսօր միլիոն Վրանկի  
 հարստութիւն ունի: Եւ Կոր-թուղան զարդարւում է  
 աւելի հարուստ և հոյակապ ապարանքներով, որոնք ներսից  
 ներկայացնում են գեղարուեստական նկարներով ծածկուած  
 փառաւոր սենեակներ: Ուժեղ և ազդեցիկ են այդ հա-  
 րուստները: Պարսից արքունիքը նրանց յարգում է, և հայ  
 ազգային գործերի մէջ առաջնակարգ դեր են կատարում:  
 Սեփ համարում ունեն եւրոպացիների մէջ: Ինչեւ Սպա-  
 հանում և չայցեւել Թուղան, չնկարագրել այն — անհասարկ  
 են համարում արեւմտեան բոլոր ճանապարհորդները:

(c) Կոր-թուղայի բարեբախտութիւնը յարատեւ չէր և  
 ինչեւ չէր կարող Պարսկաստանի պէս մի երկրում, ուր  
 քաղաքական կայուն կարգեր չը կային, իսկ տիրողի կա-  
 մայականութիւնը ոչնչացնում էր ամեն մի օրինական  
 հասկացողութիւն: Լըդէն ժթ դարի երկրորդ կէսից  
 սկսւում է Պարսից թոյլ և մեղկ թագաւորների շրջանը,  
 և երկրում գլուխ էր բարձրացնում անիշխանականութիւնը:  
 Լըմատապէս փոփոխւում է կառավարութեան վերաբեր-  
 մունքը դէպի Կոր-թուղան: Լոյլ ևս նա չէ հովանաւորւում,  
 որպէս զի ծաղկած պահէ վաճառականութիւնը և դրանով  
 զարկ տայ և երկրի տնտեսական առաջադիմութեան:  
 Վնալով հայ գաղութը դառնում է մի կթան կով Շահերի  
 և այլ տիրողների համար որոնք բռնակալական միջոցներով  
 դուրս են քաշում վաճառականների հարստութիւնները:

## PART B

## ESSAYS, GRAMMAR, AND COMPOSITION

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay on ONE of the following subjects :— 15
  - (a) *The use and Abuse of Athletics*: Various kinds of athletic exercise—their effect on health—their moral value—their baneful effects if carried to excess.
  - (b) *Thrift*: Importance of thrift—causes of extravagance—means to secure a habit of thrift.
2. Write an essay on ONE of the following subjects :— 15
  - (a) Your favourite hobbies
  - (b) An important day in your life.
  - (c) The gramophone.
3. (a) Correct FOUR of the following sentences :— 4
  - (i) Are there any freeships vacant in your school?
  - (ii) He talks English well.
  - (iii) I knew he was coward.
  - (iv) He was cowed down by the threat.
  - (v) One of his family members is dead.
  - (vi) Are you coming to live with me in the new boarding?
  - (vii) This word is used both as a noun as well as a verb.
  - (viii) I cannot but praise him too highly.

(b) *Either*, Supply appropriate prepositions in FOUR of the following blank spaces :— 4

  - (i) He is dull ——— hearing.
  - (ii) He is ——— his rights.
  - (iii) He was much annoyed ——— his brother.
  - (iv) He was called upon to appear ——— the judge.
  - (v) He was lost ——— the crowd.
  - (vi) You must abide ——— your decision.
  - (vii) He killed two birds ——— one stone.

Or, Select appropriate words from the following list :—*discovery, invention, ability, capacity, habits, customs, deceptive, deceitful* ; and insert them in the blanks in TWO of the following sentences :— 4

  - (i) In some cases failure is due to lack of ———, but in many more it is due to lack of ——— for steady work.
  - (ii) Those national ——— are best which lead to good ——— among the people.
  - (iii) The ——— of the properties of the magnetic needle made possible the ——— of the mariner's compass.
  - (iv) ——— persons often have ——— appearances.
4. *Either*, Write a letter to a friend in town, inviting him to spend his summer holidays with you in the country and telling him of the pleasures he may expect. 12
 

Or, (a) Re-write the following passages from a speech by Macaulay in the form of reported speech (Begin 'Lord Macaulay asked . . .') :— 6

'In what position do we stand? Here we have a great evil, as it seems to me—a growing evil. But if we strike at it, we shall neces-

sarily inflict a wound upon the institution of property. What was the recommendation of the Duke of Wellington upon this very subject? What would be the effect, if this bill should be carried through the House of Commons and lost in the House of Lords?'

(b) Combine the following sentences in one complex sentence and analyse it to show the relation between the component clauses:—

The sun set. I was preparing to pass the night in a tree. A negro woman stopped to observe me. She was returning from the labour of the field. She perceived my weariness and dejection. She inquired into my situation. I briefly explained it to her. With a look of compassion she told me to follow her. 6

5. Punctuate the following passage, using capital letters where necessary:—

An important football match was to take place near a large town one saturday in september and an excursion train was taking people to see it the train went very slowly and had numerous stoppages after a time it reached a station called march and was brought to a stand there a porter went up and down the platform calling out march much the train stayed so long that the passengers became angry one of them put his head out of the window and asked the porter what it was march said the porter well it may be march now but it was september when we started shouted the passenger this joke put the other passengers in good humour again.

## SECOND PAPER

*Head Examiner*—MR. HIRANKUMAR BANERJEE, M.A., B.LITT. (OXON).

Examiners—	{	SRIMATI LATIKA BASU, B.A., B.LITT.
		„ MRINALINI BONNERJEE, M.A.
		MISS A. W. LOGAN, M.A.
		„ DOROTHY MOSES, M.A.
		SRIMATI ELA SEN, M.A.
		MR. ABDUL MANNAN, M.A., B.T.
		„ ALTAF HOSSAIN, M.A.
		„ JOSEPH ARULANANTHAM, B.A.
		„ BIPINBIHARI BANERJEE, B.A., B.T.
		„ BISHNUPADA BANERJEE, M.A., B.T.
		„ NAGENDRANATH BANERJEE, M.A.
		„ PRAPHULLAKUMAR BASU, M.A.
		„ NARENDRANATH BHATTACHARYYA, B.A.
		„ RAMNARAYAN BHATTACHARYYA, B.A., B.T.
		„ MAHI MOHAN BOSE, M.A., B.A. (OXON.).
		„ AMBIKACHARAN CHAKRABARTI, M.A.
		„ JATINDRANATH CHAKRABARTI, M.A.
		„ KARTIKCHANDRA CHAKRABARTI, B.A.
		„ PRAMATHANATH CHAKRABARTI, M.A.
		„ BANKIMCHANDRA CHATTERJEE, M.A.
		„ PRAPUHLAKUMAR CHATTERJEE, M.A.
		„ BANABIHARI DAS, M.A., B.T.
		„ RADHASUNDAR DAS, B.A.
„ PRAPHULLAKUMAR DASGUPTA, M.A.		
„ DGINDRACHANDRA DUTT, M.A.		
MRS. RAMAH LUDDY, B.A., B.T.		
SRIMATI SUPRABHA SEN, B.A., B.T.		

Examiners—  
(Contd.)

Mr. SRISCHANDRA GANGULI, M.A., B.T.  
 .. BHIMAPADA GHOSH, M.A.  
 .. NALININATH GHOSH, M.A.  
 .. ANANTAPRASAD GOSWAMI, M.A.  
 .. JATINDRACHANDRA GUHA, M.A., B.T.  
 .. DHIRENDRANATH KUNDU, M.A.  
 .. HEMANTBAKUMAR MAJUMDAR, B.A.  
 .. SAURINDRANATH MAJUMDAR, M.A.  
 KHAN BAHADUR MD. YUSUF, M.A.  
 Mr. BHUJANGABHUSHAN MITRA, M.A.  
 .. AMULYADHAN MOOKERJEE, M.A.  
 .. DHARANIDHAR MOOKERJEE, M.A., B.T.  
 .. HARISCHANDRA MOOKERJEE, M.A.  
 .. NAGENDRACHANDRA MOOKERJEE, M.A.  
 .. SRISCHANDRA MOOKERJEE, B.A.  
 .. CHARUCHANDRA NANDI, M.A.  
 .. LALITKUMAR NİYOGI, M.A.  
 .. QUAZI AKRAM HOSSAIN, M.A.  
 Mr. PRAMATHANATH RAY, M.A.  
 .. SASIPADA SAHA, M.A., B.T.  
 .. PRAMATHANATH SARKAR, B.A.  
 .. JOGESCHANDRA SINHA, M.A.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Either, 'Fearful as were the realities, the rumours were a hundred-fold more alarming' (*The Incendiary*). Mention some of the real horrors of the situation as well as the wild rumours flying about. 10

Or, What changes in his native village as well as in the political situation in the country surprised Rip Van Winkle on his return? How did he come to be recognized at last? 10

2. Either, Mention some of the incidents that make the *History of John Gilpin* so 'diverting'. 10

Or, Relate in your own words the story of *Napoleon and the British Sailor*. What traits of Napoleon's character are revealed in it? 10

3. Either, Write a note on ONE of the following topics, and refer to a few incidents, as recorded in *Iranhoe*, in illustration of your remarks:— 16

(a) The position of Jews in England in the days of Richard I.

(b) The general insecurity and lawlessness prevailing at the time.

Or, Briefly narrate the story of Cedric's escape from the Castle of Torquilstone. 16

4. Explain, with reference to the context, THREE passages, taking ONE from each group:—

#### GROUP A

- (i) I think the *golden net* that April brought  
 From some *warm* world his *wavering* soul had caught :  
 For, sunk in *vague sweet longing*, did he go  
 Betwixt the trees with doubtful steps and slow.  
 (Add notes on the italicized expressions.)

- (ii) O, fool, thou knowest not *the compact* then  
That with the *three-formed* goddess she has made  
To keep her from the loving lips of men,  
And in no *saffron gown* to be arrayed.  
(Add notes on the italicized expressions.)

6

## GROUP B

- (i) Their crimes on gold shall misers lay,  
Who pawn'd their sordid souls for pay.  
Let bravos then (when blood is spilt)  
Upbraid the passive sword with guilt. 4
- (ii) But should some new intruder rise to bind the ocean's bride.  
Should once thy wave-dominion be questioned or denied,  
Then rouse thee from thy happy dream, go forth and be again  
The England of our hero-sires who broke the might of Spain. 4

## GROUP C

(i) I now find the truest way of finding esteem, even from the indigent, is to give away nothing, and thus have much in our power to give. 4

(ii) Every corner of the village street realized Shakespeare's picture of 'a smith swallowing a tailor's news'. 4

5. Give the substance of one of the following passages in about a third of its length:— 25

(a) The fearlessness which brave men share with brave beasts is generally, but not always, accompanied by bodily vigour. It is, however, something more than a mere bodily quality; and it is a much higher quality in men than in brutes. For men have thinking and reasoning powers, which the brutes have not; and I am sure we shall all agree that, when we are prompted by reason and conscience to face pain and danger in a good cause, our bravery is nobler than that of the brutes who are often impelled by mere natural instinct of self-defence, or blind appetite and rage. It is enough for animals to do what their nature leads them to do without understanding why they do it. But it is not enough for us to whom God has given also the intellectual faculty.

(b) Many people preach the doctrine of the duty of life. It is comparatively seldom that you find one who puts the joy of life as something to be cultivated, to be encouraged on an equal footing with the duty of life. And of all the joys of life which may fairly come under the head of recreation, there is nothing more great, more refreshing, more beneficial in the widest sense of the word, than a real love of the beauty of the world. Some people cannot feel it. But to those who have some feeling that the natural world has beauty in it, I would say: Cultivate this feeling and encourage it in every way you can. Consider the seasons, the joy of the spring, the splendour of the summer, the sunset colours of the autumn, the delicate and graceful bareness of wild trees, the beauty of light upon water, what the old Greek called the unnumbered smiling of the sea.

6. Tell the following story in your own prose:—

25

A stranger came one night to Youssouf's tent,  
Saying—'Behold one outcast and in dread,  
Against whose life the bow of Power is bent,  
Who flies, and hath not where to lay his head.  
I come to thee for shelter and for food:  
To Youssouf, call'd through all our tribe the Good.'



'This tent is mine,' said Youssouf,—'but no more  
Than it is God's: come in, and be at peace!  
Freely shalt thou partake of all my store,  
As I of His Who buildeth over these  
Our tents His glorious roof of night and day,  
And at Whose door none ever yet heard Nay.'

So Youssouf entertain'd his guest that night;  
And waking him ere day, said—'Here is gold!  
My swiftest horse is saddled for thy flight,—  
Depart before the prying day grow bold!'  
As one lamp lights another, nor grows less,  
So nobleness enkindleth nobleness.

That inward light the stranger's face made grand  
Which shines from all self-conquest; kneeling low,  
He bow'd his forehead upon Youssouf's hand,  
Sobbing—'O Sheikh! I cannot leave thee so.—  
I will repay thee,—all this thou hast done  
Unto that Ibrahim who slew thy son!'

'Take thrice the gold!' said Youssouf,—'for with thee  
Into the Desert, never to return,  
My one black thought shall ride away from me.  
First-born! for whom by day and night I yearn,  
Balanced and just are all of God's decrees;  
Thou art avenged, my First-born! sleep in peace!'

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Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Simplify

9

$$\frac{2\frac{1}{2} \div 2\frac{1}{2} \times \frac{3}{2}}{2\frac{1}{2} \div 2\frac{1}{2} \text{ of } \frac{3}{2}} - 1\frac{1}{2} - \left(1\frac{1}{2} \frac{3}{2} - \frac{3\frac{1}{2}}{2\frac{1}{2}} + 5\frac{1}{2}\right) \\ 3 + \frac{1}{3 - \frac{1}{3}}$$

2. Either, Divide 24680 rupees among A, B, and C, so that for every 2 rupees given to A, B gets 3 rupees and C gets 5 rupees. 6

Or, In a certain division sum the dividend is 37693, the quotient 52, and the remainder greater than 52 but less than 104; find the divisor. 6

3. Either, Reduce  $\frac{0.95}{0.06} \times \text{Rs. } 5 \text{ } 5 \text{ as. } 4 \text{ ps.}$ , to the decimal of Rs. 58 10 as. 8 ps.

Or, Find the greatest number of four digits which is exactly divisible by 11, 44, 66, 88, and 99. 5

4. (i) A sum of money invested at  $4\frac{1}{8}$  per cent. gives Re. 1 as interest per day. Find the sum. 4

(ii) A merchant mixed a quantity of sugar worth Rs. 8 12as. per maund with twice as much worth Rs. 7 10 as. per maund, and by selling the mixture at Rs. 8 11as. per maund gained Rs. 33. How much did he mix of each kind? 6

5. Either, Factorize 9

(i)  $x^4 + x^2y^2 + y^4$ ;

(ii)  $4x^2 - 4xy - 2yz - z^2$ ;

(iii)  $a^2(b+c) + b^2(c+a) + c^2(a+b) + 3abc$ . 6

Or, (i) Find the H. C. F. of  $a^3 - 1$  and  $a^5 - 1$ . 4.

(ii) Find the L.C.M. of  $x^2 - 12x + 35$ ,  $x^2 - 8x + 7$ , and  $x^3 - 5x^2 - x + 5$ . 5

6. (i) If  $x + \frac{1}{x} = 1$ , find the value of  $x^3 + \frac{1}{x^3}$ . 3

(ii) Simplify

$$\frac{(a-c)^2 - b^2}{a^2 - (b+c)^2} + \frac{(b-a)^2 - c^2}{b^2 - (c+a)^2} + \frac{(c-b)^2 - a^2}{c^2 - (a+b)^2} \quad 4$$

7. Either, Find the time between 4 and 5 o'clock when the hands of a clock are at right angles. 6

Or, A man rowing at the rate of 5 miles an hour in still water takes thrice as much time in going 40 miles up a river as in going 40 miles down; find the rate at which the river flows. 6

8. Draw the graphs of 8

(i)  $y = 4x$  and (ii)  $\frac{x}{3} + \frac{y}{4} = 2$ .

9. Either, (i) If the three sides of one triangle are respectively equal to the three sides of another, show that the two triangles are equal in all respects. 7

(ii) Show that the diagonals of a rhombus bisect one another at right angles. 5

Or, (i) Show that equal chords of a circle are equidistant from the centre. 7

(ii) Through a given point within a circle draw the least possible chord. 5

10. Either, (i) In an obtuse-angled triangle show that the square on the side opposite the obtuse angle is greater than the sum of the squares on the sides containing the obtuse angle by twice the rectangle contained by either of those sides and the projection of the other upon it. 9

(ii) In any triangle show that the sum of the squares on two sides is equal to twice the square on half the third side together with twice the square on the median which bisects the third side. 7

Or, (i) Show that if two chords of a circle cut one another (inside the circle) the rectangle contained by the segments of one is equal to the rectangle contained by the segments of the other. 9

(ii)  $ABC$  is a triangle right-angled at  $C$ ; from  $C$  a perpendicular  $CD$  is drawn to the hypotenuse; show that the square on  $CD$  is equal to the rectangle  $AD \cdot DB$ . 7

11. (i) Describe a parallelogram that shall be equal to a given triangle and have one of its angles equal to a given angle. 6

(ii) Describe a rhombus equal to a given parallelogram and standing on the same base. When does the construction fail? 6

## ADDITIONAL PAPER

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Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. (i) *Either*, Arrange  $\sqrt{17}$ ,  $4\frac{8}{25}$ ,  $4\frac{5}{25}$  in decreasing order of magnitude. 6  
*Or*, Calculate correct to three places of decimals 6

$$8 + 3\sqrt{2} \quad 8 - 3\sqrt{2} \\ 3 + \sqrt{5} \quad 3 - \sqrt{5}$$

(ii) A rectangular garden is surrounded by a wall 6 ft. high and 9 in., thick. How many bricks, each 9 in. by  $4\frac{1}{2}$  in. by 3 in., will be required to build the wall, if the measurements of the garden are 120 ft. by 90 ft. inside the wall? 5

2. (i) Find the square root of 3469·21. 5

(ii) *Either*, Find the weight in kilograms of 525 c. c. of mercury, it being given that mercury is 13·6 times heavier than water and 1 c. c. of water weighs 1 gram. 6

*Or*, A pail, when  $\frac{7}{8}$  full of water weighs 19 seers 6 chataks, and  $\frac{3}{4}$  full of water weighs 18 seers 7 chataks. Find the weight of the pail when empty. (1 seer = 16 chataks.) 6

3. A contractor makes an agreement on Monday evening, 10 March, to build a reservoir by the evening of 31 March. He employs 9 men, who begin on Tuesday, 11 March, in the morning, and the job is two-thirds finished by the evening of 25 March. How many more men must he employ to finish the job just in time? The men do not work on Sunday and work half time on Saturday. 8

4. Either, (i) Solve the equation

$$3x^2 - 11x + 9 = 0.$$

(ii) The sum of two numbers is 2 and the sum of their reciprocals is  $2\frac{1}{6}$ . Find the numbers.

Or, (i) Simplify

$$\frac{3^p 4^q 6^r}{2^{r+q} 12^{r+p}}$$

(ii) If

$$\frac{bx + cy}{b - c} = \frac{cx + az}{c - a} = \frac{ay + bz}{a - b},$$

prove that

$$(a + b + c)(x + y + z) = ax + by + cz.$$

5. Draw the graph of  $2x^2 - 7x - 3$  between  $x = -1$  and  $x = +t$  your graph determine the roots of  $2x^2 - 7x + 3 = 0$ .

6. Either, (i) Find the sum of an arithmetical progression in  $n$  terms, the first term being  $a$  and the last term  $l$ .

(ii) Find the sum of all multiples of 13 between 750 and 1,000

Or, (i) Find the sum of a geometrical progression containing the first term being  $a$  and the common ratio  $r$ .

(ii) Find the sum to infinity of the series

$$1 + \frac{1}{10} + \frac{1}{10^2} + \frac{1}{10^3} + \dots$$

Show that the sum of the first ten terms of this series falls short of the sum to infinity by less than a thousand-millionth part of 1.

7. Either, (i) Prove that the greater of two chords in a circle is nearer to the centre than the less.

(ii) If two equal chords intersect, prove that the segments of one are respectively equal to the segments of the other.

Or, (i) Draw a circle of radius 5 cm. Inscribe by geometrical methods a regular octagon in the circle (only traces should be given).

(ii) Show how to construct a circle to touch each of two parallel straight lines and a transversal. (A neat figure with brief statement of construction is required.)

8.  $P$  is a point on an arc of a circle whose chord is  $AB$ .  $AP$  is produced to  $Q$ , so that  $PQ = PB$ . Find the locus of the middle point of  $BQ$ .

9. Either, (i) Prove that areas of similar triangles are proportional to the squares upon corresponding sides.

(ii) Two equiangular triangles have areas in the ratio 3 : 2 and an altitude of the greater is 5.2 cm. What is the corresponding altitude of the other?

Or,  $P$  is a point lying between two intersecting straight lines  $OA$  and  $OB$ . Triangles are formed with adjacent sides along  $OA$  and  $OB$  by drawing lines through  $P$ . Show that of these triangles the one of which this interior side is bisected at  $P$  has the minimum area.

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MR. HARGOVIND DAS SETH

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English (a) and any other FOUR of the following :—25

(a) त्वन्मातामह-शापादियमकालिनेव जरा मासुपस्थिता. तामहं तस्यैवानुग्रहाद् भवतः सञ्चारयात्येकं वर्षसहस्रम् ; न ततोऽस्मि द्विषयेषु ।

(b) स्वर्गैरेवाहीमस्त्वां निजं पदं प्रापयिष्यामि । इत्यभिधाय तेषामनुदिनमाभिचारिकं बुद्धिमीक्षाय, शकस्य च तेजोवृद्धये लुब्धवः ।

(c) नूनमेते सर्वेऽपि नम्रकाः शिरसि दण्डाहताः काञ्चनमया भवन्ति । तदहमपि प्रातः प्रभूतानाह्वय लगुडैः शिरसि हन्मि, येन प्रभूतं हाटकं मे भवति ।

(d) अथ लब्धमाने दिवाकरे उत्तुङ्ग-सौधोदङ्गादवतरन्तं कुपितमिव कृतान्त वत्सराजं वीक्ष्य विविधेन सिधेन स्वभवनानि प्रापुर्भूताः सभासदः ।

(e) कुमारी सुशील्यति तत्पितरौ परां प्रीतिमासादितवन्तौ, सर्वे अश्ववर्गाश्च हर्षिता बभूवुः । ब्रह्मस्वामी प्राप्तजीवनः सर्वभोगं परित्यज्य योगं ध्यायंस्तस्यै ।

(f) तदनन्तरं सञ्जातेर्याताः सपत्न्यौ यदानींश्च हन् करिष्यन्ति तदाहं कोपाकुलला लगुडेन ताडयिष्यामि । इत्यभिधाय तेन लगुडः क्षिप्तः ।

(g) मया धर्मशास्त्रं श्रुत्वा वीतरागेशदं दुष्करं व्रतं चान्द्रायणमध्यवसितम्, यतः परस्परं विवदमानानामपि प्रमाणाश्चास्त्राणामहिंसा परमो धर्म इत्येकमत्यम् ।

(h) तत् पुरुषवचनमाकर्ण्य स क्रूरः क्रोधाद् विष्कृतपूर्वसंस्कारोऽवदत् युष्माभिर्मम भक्षित-  
व्यम्, इति वदन्नैव काष्ठात् पतिव्री गीरक्षकैर्वापादितः ।

Account for the case-endings in विषयेषु in (a), अहीमि in (b), and दिवाकरे in (d); derive आह्वय in (c) and अश्ववसितम् in (g); account for शानम् in विवदमानानाम् in (g); expound the *samāsas* in अनुदिनं in (b) and पितरौ in (e).

2. Explain in English, with reference to the context, one only from each of the following groups :—

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## GROUP A

- (a) मुहूर्तादिव चापय्यत् पुरुषं रक्तावससम् ।  
 वक्षसीलिं वपुश्चन्तादित्य-समतेजसम् ॥  
 श्यामावदातं रक्ताच्च पाशच्छलं भयावहम् ।  
 स्थितं सत्यवतः पार्श्वे निरीक्षन्तं तमेव च ॥
- (b) निवर्त, तुष्टोऽणि तवानया गिरा  
 स्वराक्षर-व्यञ्जनहेतुयुक्तया ।  
 वरं वृणीष्वेह विनास्य जीवितं  
 ददानि ते सर्व्वमभिन्दति वरम् ॥

## GROUP B

- (a) यथा वाराधनं तस्य भूया कार्य्यं महात्मनः ।  
 प्रसादसुसुखारत्नं कथयन्तु महर्षयः ॥
- (b) सोऽहं तथा यतिश्यामि यथा सर्व्वोत्तमोत्तमम् ।  
 स्थानं प्राप्स्याम्यंशेषाणां जगतामतिपूजितम् ॥

## GROUP C

- (a) तद्धिन् सङ्गसाक्षसमप्रमादे  
 रामे स्थिते कार्मुकबाणपाणौ ।  
 हतापि तेऽहं न जगं गमिष्ये  
 आज्यं यथा मच्चिकयावकीर्णम् ॥
- (b) जीवन्निरं वज्रधरस्य हस्ता-  
 च्छचीं प्रधृष्याप्रतिरूपरूपाम् ।  
 न मादृशीं राक्षस ! धर्षयित्वा  
 पीताम्बतस्यापि तवास्ति मोक्षः ॥

Account for the case-endings in मुहूर्तात् in (a) in Group A, तस्य in (a) in Group B, and जगताम् in (b) in Group B. 5

Notice the grammatical irregularities in the underlined words above.

3. Narrate fully either in English or in Sanskrit the story of स्वमन्त्रक ; state also the boons that were conferred on Sāvitrī by Yama. 6+4



4. (a) Decline *either* the bases चदस् [ in the masculine ] in the genitive (चदो) and दुहित् in the accusative (द्वितीया), or सृज् [ in the feminine ] in the ablative ( पञ्चमौ ) and राजन् in the dative ( चतुर्थी ). 8

(b) Conjugate *either* चस् (to be) in the लोट् second person or लभ् in लङ्, third person. 8

(c) Give the comparative and superlative forms of any *three* of the following by adding ईयस् and इष्ठ :— 8

प्रिय, गुरु, प्रशस्य, वृद्ध, and युवन् ।

5. Correct any **THREE** of the following :— 6

- (a) सर्वेषां विद्यानां ब्रह्मविद्या श्रेष्ठतमा ।
- (b) सा अघुना चतुर्भिः अप्सराभिः परिहृत्य तिष्ठति ।
- (c) तस्य साहो मे मैत्रत्वमस्ति ।
- (d) यज्ञदत्तस्य द्वौ मित्रौ हरदत्तः विष्णुगुप्तश्च ।
- (e) प्राते उत्थाय स नित्यं गृहकर्ममनुतिष्ठति ।

6. Translate into Sanskrit any **FIVE** of the following :— 25

(a) When Yudhisṭhira beheld the dead bodies of his kinsmen slain in the battlefield, he became sorry.

(b) Cows are of different colours, but the colour of the milk they give is the same.

(c) After his father's death he came to Calcutta, where his efforts were crowned with success.

(d) At this speech, all the assembled Brāhmaṇas were enraged ; but they did not say anything.

(e) Wise men and pupils followed him, and the king promised to give him money.

(f) He then went to Benares, the holy city of the Hindus, and devoted himself to the study of Hindu Śāstras.

(g) At the age of fourteen he was determined to retire from the world and become a Sannyāsi.

ADDITIONAL PAPER

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(To look over answer-papers written in Uriya character).

MR. MAHESWAR DAS, M.A.

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MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. How did Dhruva's simple wish develop into a high resolve ?

10

2. Translate into English any TWO of the following :—

2 × 5 = 10

(a) अनन्तपारं किल ब्रह्मशास्त्रं  
स्वल्पं तद्युर्वह्वश्च विज्ञातः ।  
सौरं ततो ब्राह्मणपात्य फल्गु  
हंसैर्यथा चौरनिवाण्मध्यात् ॥

(b) न जातु कामः कामानामुपभोगेन शान्यति ।  
हविषा कृण्वन्मेव भूय एवमभिवर्धते ॥

(c) हंससारससंघुष्टा बन्दे गोदावरौ नदीम् ।  
चिप्रं रामाय शंसध्वं “सीतां हरति रावणः” ॥

3. Translate into English any THREE of the following :—

10 × 3 = 30

(a) अथ अक्षाचलावलम्बिनि सूर्ये उपप्राप्याथः शिष्यमुवाच—“नियतं कुपित उपमन्युर्यतो नागच्छति अधुनाऽपि ।” ततः शिष्येण सार्द्धमरण्यं गत्वा उपप्राप्यायस्तस्याज्ञानाय ब्रह्मं चकार—  
“कासि वत्स, उपमन्यो एहि ।” स प्रत्युवाच उच्चैः—“अयमस्मिन् कूपे पतितीऽहम् । अन्वीभूतीऽस्मि ।”

(b) आसीत् कुसुमपुरे नन्दी नाम राजा । तस्य शकटारो नाम मन्त्री बभूव । स च केनापि अपराधेन सर्वस्वं गृहीत्वा सुपुत्र-कलवीं राज्ञा कारागृहे निक्षिप्तः । तत्रापि तस्मै सपरिवाराय एकशरावपरिमितं प्रतिदिनं भक्ष्यं दीयते । तद् दृष्ट्वा तेनाभिहितम्—“अयं राजा करालहृदयो दुस्त्रं दत्त्वाभ्यान् पातयति ।”

(c) तवान्तरं सगरी इयमेधमारिभे । तत्पुत्रैरधिष्ठितम् अस्य अश्वं कोऽप्यपहृत्य भुवी विवरं प्रविशेत् । ततश्चान्धन्वेषणाय तनयान् युयोज, तनयाश्च अतिनिर्वन्धेन वसुधातलम् एकैकी योजनं योजनं चखान् । पातालं चाश्वं परिधमन्तं ते ददृशुः नातिदूरस्थितश्च कपिलर्विम् अपमेधे शरत्काले अर्कमिव ।

(d) वानरोऽपि रत्नमालाविभूषितकण्ठो वृक्षप्रासादेषु परिधमन् जनैर्दृष्टः पृष्ठश्च—“भवान् इयन्तं कालं कुत्र स्थितः ? भवतेऽह्यवमाला कुत्र लब्धा, या दीप्ता स्थानमपि तिरस्करति ?” वानरः प्राह—“अस्मि कुत्रचिद् अरण्ये गुप्ततरं मङ्गत् सरो यत्र अर्चोदिते सूर्ये रविवारे यः कश्चिन्निमज्जति स धनपतिप्रसादात् रत्नमालाविभूषितकण्ठो निःसरति ।”

4. (a) Combine in sandhi form THREE of the following :—

3

शिव + एहि ; विष्णो + अत्र ; राजन् + तस्य ; सः + अयम् ; गौः + इयम् ।

(b) Give the feminine of THREE of the following :—

3

मनुष्य ; पचत् ; शूद्र ; अक्षय ; गृहपति ।

(c) Expound the *samāsas* in THREE of the following :— 3

चङ्गीराजः ; युधिष्ठिरः ; चण्डालः ; यथाशक्ति ; राजसूयः ।

(d) Account for each विभक्ति in the words in the following sentence :— 4

जनेषु भक्तः मुक्तये पुण्यात् शिवस्य दर्शनम् आशु लब्धम् ।

5. (a) Decline THREE of the following :—लक्ष्मी in प्रथमा ; स्त्री in द्वितीया ; पथिन् in तृतीया ; गौ in षष्ठी ; विद्वत् in सप्तमी । 3

(b) Conjugate THREE of the following :—मुच् in लट् third person ; दृश् in विधिलिङ् second person ; दा in लोट् first person ; इष् in लृट् third person ; ग्री in लृट् first person. 3

(c) Correct THREE of the following sentences :— 6

(i) अद्य प्रातः साधुर्वनं जगाम ।

(ii) सूर्यस्य तेजो लताः दग्धवत्यः ।

(iii) गावः ददन् भवान् स्वर्गं यास्यसि ।

(iv) फलं भक्ष्यं कृत्वा त्वया गृहं गमिष्यते ।

(v) मातरं श्रुत्वा इमं लोकं विजयेत् गृही ।

6. Translate into Sanskrit any FIVE of the following :— 5 × 5 = 25

(a) When Bharata heard of the death of his father, he was deeply afflicted with grief and shame.

(b) When the wicked nurse Mantharā suddenly appeared there, Śatrughna spoke out his indignation in hot words.

(c) After this, Rāma, Sītā, and Lakṣmana went their way to Pāñcavati to dwell there for many years.

(d) Near that beautiful spot there was a sheet of water as bright as the sun, and fragrant with lilies.

(e) In the distance there were high mountains vocal with peacocks and other charming birds.

(f) Lakṣmana built a large hut and covered it with branches of trees and leaves.

(g) Now, one day, Śūrpanakhā, assuming a most captivating form, approached the valiant Rāma, while conversing with Sītā.

## PĀLI

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## COMPULSORY PAPER

1. Translate into English any two of the following extracts, adding notes on the words italicized:— 15

(a) So ekadivassam paribbājakārāmā nikkhamitvā *Sāvattihījanī* bhikkhūya caranto elakānaṃ yujjhanatthūnaṃ sampāpuṇi. Elako taṃ disvā paharitukāmo osakki. Paribbājako, "esa mayhaṃ apacitīm dasseti" ti na paṭikkami. Elako vegenāgantvā taṃ ūrmhi paharitvā pātesi. Tassa taṃ asantapaggahakāraṇaṃ bhikkhusaṅghe pākaṭaṃ ahoṣi, Bhikkhū *dhamma-sabbhājanī* kathaṃ samuṭṭhāpesuṃ.

(b) Satthā tena saddhiṃ paṭisanthāraṃ katvā "*upāsaka*, kacci maggaṃ āgacchanto appakilamathena āgato si" ti pucchitvā, "bhante, buddhārammaṇaṃ pītiṃ gahe tvā udakapiṭṭhe paṭiṭṭhaṃ labhitvā paṭhaviṃ maddanto viya āgato 'mhi" ti vutte, "na kho upāsaka tvaṃ ñeva Buddhagūṇe anussaritvā paṭiṭṭhaṃ laddho, pubbe pi *upāsaka* samuddamajjhe nāvāya bhinnāya Buddhagūṇe anussarantā paṭiṭṭhaṃ labhiṃsu" ti vatvā tena yācito *atītaṃ* āhāri.

(c) Tatrāpi kañcho agunavādiṃ adisvā attano guṇakathaṃ eva sutvā "*janapadaṃ* parigaṇhiṣṣāmi" ti *amacce* rajjaṃ paṭicoḥāpetvā rathaṃ āruya sārathīṃ eva gahe tvā *aññātaka* vesena nagarā nikkhamitvā janapadaṃ parigaṇhamāno yāva paccantabhūmiṃ gantvā kañcho agunavādiṃ adisvā attano guṇakathaṃ eva sutvā paccantasīmato *mahāmaggena* nagarābhimukho nivatti.

(d) Punavāre te vāṇijū ekaṃ mayūrarājānaṃ gahe tvā yathā accharā-saddena vassati paṇippahārasaddena naccati evaṃ sikkhāpetvā *Bāverurattṭhaṇi* agamaṃsu. So *mahājāne* sannipatite nāvāya dhure ṭbatvā pakkhe vidhūnitvā madhurassaraṃ nicchāretvā nacci. Manussa taṃ disvā somanassajātā "etaṃ ayyo sobhaggappattaṃ susikkhitasakunārājānaṃ ambhakaṃ dethā" ti āhaṃsu.

2. Account for the case-ending in either *bhikkhūya* or *vegena* in extract (a). Parse either *laddho* in (b) or *yāva* in (c). Derive either *vassati* or *nicchāretvā* in (d). Expound the Samāsa in *somanassajātā* (d). 4

3. Summarize in English one of the following stories:—(a) *Suḥsumāra-jātaka*, (b) *Silānisansa-jātaka*, (c) *Bāveru-jātaka*. 9

4. Translate into English any TWO of the following stanzas, adding grammatical notes on the words italicized:— 10

(a) Yath' indakkhīlo paṭhaviṃ sito *siyā* |  
catubbhi *vātehi* asampakampiyo |  
tathūpamaṃ sappurisaṃ vadāmi ||

(b) Evaṃ dadanti *ñāṭinaṃ* ye honti anukampakā |  
suciṃ paṇitaṃ kālena *kappiṇaṃ* pānabhojanaṃ |  
idaṃ vo *ñāṭinaṃ* hotu, sukhitā hontu *ñāṭayo* ||

(c) Paccuggamaṇā vattanti, *vajjanti* bheriyo *bahu* |  
Āmoditā naramarū *sādhukāraṃ* pavattayum ||

5. Answer any TWO of the following :—

6 + 6 = 12

- (a) Give in English the substance of the *Ratana-Sutta*.
- (b) Quote from memory TWO stanzas correctly from your *Jātaka* text.
- (c) State the *Nimittas* that manifested themselves to Sumedha, prosaging his attainment of Buddhahood.

6. Make necessary corrections in any FOUR of the following :— 2 × 4 = 8

- (a) Aparā pi assa tayā sahāyā ahesum.
- (b) Sīho nirogi hutvā vanamahisaṃ badhitvā khādati.
- (c) Na sakko aṭṭhaṃ ahaṃ maraṇā muccitum.
- (d) Mā maṃ kiñci avoca, sacchatha.
- (e) Sāmi, mayhaṃ janapade gamissāma.
- (f) So taṃ paṭṭhāya mā ettha āgacchati.

7. (a) Join, according to the rules of Sandhi, any FOUR of the following :—*kho + ajja* ; *pati + uppanna* ; *na + idan* ; *tāva + eva* ; *ati + eka* ; *na + eva*. 2

(b) Disjoin the Sandhi in any FOUR of the following :— 2  
*pariḍāno*, *tadaminā*, *bavhābādho*, *yajjevān*, *tesūhaṇ*, *yathariva*.

(c) Decline fully the base of EITHER *Sāvattihiyaṇ* OR *nāvāya*. 3

(d) Conjugate the root of EITHER *osakki* OR *ahosi* in the imperative. 2

(e) Name and expound the Samāsa in any TWO of the following :— 2  
*ujjhanatthānaṇ*, *appakilamathena*, *nagarābhimukho*, *Īḍaverurattham*.

(f) Frame sentences to illustrate the use of any THREE of the following :— *kahaṇ*, *kira*, *ṇato*, *ito*, *samanā*, *ārabbha*. 2 × 3 = 6

8. Translate into Pāli any FIVE of the following passages :— 5 × 5 = 25

- (a) I dwell on the bank of the Ganges.
- (b) There are paddy-fields around my dwelling.
- (c) I go out to preach Buddha's doctrine to my neighbours every evening.
- (d) They have a very high regard for the Master.
- (e) The king takes great interest in matters of religion.
- (f) The ministers have been directed to relieve the distress of the poor.
- (g) They have established alms-houses for old and helpless people.

### ADDITIONAL PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate any TWO of the following extracts into English :—

10

- (a) Nidhiṃ nidheti puriso gambhīre odakantiko |  
atthe kiṇce samuppanne atthāya me bhavissati ||  
*Rājato* vā duruttassa corato piḷitassa vā |  
iṇassa vā pamokkhāya dubbhikkhe āpadāu vā |  
etaḍ *atthāya* lokasmiṃ nidhināma nidhiyate ||
- (b) Advejjavacanā buddhā, amoghavacanā jinā |  
vitatham n' atthi buddhānaṃ, dhuvaṃ buddho bhavāṃ ahaṃ ||  
Yathā khittam *nabbe* leḍḍu dhuvaṃ patati bhūmiyaṃ |  
tath' eva buddhasatthānaṃ vacanaṃ dhuva-sassataṃ ||
- (c) So mātukucchito nikkhanto *suvaṇṇavayṇo* ahoṣi, mukhaṃ  
rattakambalapuñjavayṇam, batthapādapariyantaṃ lākhāperikammakatā viya,  
*vāladhi* camarassa viya ahoṣi, sarīram paṇ' assa mahantaṃ assapotakappa-  
māṇam ahoṣi.

(d) So anupubbena veyyapatto soḷasavassakāle Takkaṣilaṃ gāntvā sabbasippesu nipphattiṃ patvā pitu accayena rajje patiṭṭhāya dhammena samena rajjāṃ kāresi, chandādivasena agantvā vinicchayaṃ anusāsī.

2. Explain any ONE of the following stanzas in English :— 4

(a) Mā brāhmaṇa ittaradassanena viṣṣāsam āpajjī catuppadasa |  
daḷhappahāraṃ abhikaṅkhamāno avasakkati dassati supphāraṃ ||

(b) Yātha pi jajjaraṃ nāvaṃ paluggaṃ udakagāhinaṃ |  
sāmi chaḍḍetvā gacchanti anapekkhā anattikā ||  
Evaṃ evāhaṃ imaṃ kāyaṃ navacciddaṃ dhuvaṣṣavaṃ |  
chaḍḍayitvāna gacchissāṃ jippanāvaṃ va sāmikā ||

3. Write short explanatory notes on any THREE of the following :—

(a) bako kakkatākā-m-iva ; (b) tātīyasāvanāya ; (c) moro Bāveruṇi āgamā ;  
(d) daḷhaṇi daḷhassa khipati ; (e) maṅgalaṃ uttamaṃ ; (f) buddhakare dhamme .

4. (a) Account for dative case-ending in *atthāya* (1 a), locative case-ending in *naḥhe* (1 b), and instrumental case-ending in *accayena* (1 c). 3

(b) Parse *dhuvaṃ* in 1 (b), *abhikaṅkhamāno* in 2 (a), and *avasakkati* in 2 (a). 3

(c) Expound the Samāsas in any THREE of the following :—*amoghavacanā* (1 b), *suvaṇṇavaṇṇo* (1 c), *vāṇādhi* (1 c), *soḷasavassakāle* (1 d), *sabbasippesu* (1 d). 3

5. Fill up the gaps in the following :— 4

So mahantena ——— vaḍḍhanto soḷasa ——— kāle niyāmaka ——— nipphattiṃ ——— aparabhāge ——— accayena niyāmakajettṭhaka ——— niyāmaka-kammaṃ ——— paṇḍito ——— ahoṣi.

6. Construct short sentences to illustrate the use of any FOUR of the following :—(a) *ete nāma*, (b) *kin te*, (c) *idam eva*, (d) *attha kho*, (e) *tatra sudhaṇi*, (f) *yaṃasmā tasmā*, and (g) *yena tena*. 4

7. Correct errors in any FOUR of the following :— 4

- Taṃ khane yeva.
- Sā yāgughaṭṭassa otāresi.
- Dhītā mama kāyānarūpo.
- Tumhe rajjaṃ vā detu yuddhaṃ vā.
- Tayā atisundaro kataṃ.

8. (a) Decline EITHER *rājā* OR *mātā* in all cases (singular number only). 2

(b) Conjugate EITHER *√as* (to be) OR *√hā* (to stand) in present tense and optative mood. 2

9. Translate the following into Pāli :— 25

Sleep quietly, my dear boy, and get up early from bed. Sleep invigorates the body. It makes you fit for work. It brings you to a new world of joy and happiness.

10. Translate any TWO of the following extracts into English :— 30

(a) Susīma, tvaṃ daharo hutvā mahallako jāto. Ettakaṃ kālaṃ gūthakalale nimuggagāmasūkaro viya kāmakaḷāle nimujjitvā taṃ kalalaṃ jahitum na sakkosi

Kālāni kesāni pure ahesum jātāni sīsamhi yathāpadese |  
tān' aṇṇa setāni Susīma disvā dhammaṃ cara, brahmacariyassa kālo ||

(b) Lumbinivanaṃ nāma maṅgala-sāvanaṃ atthi. Tasmīṃ samaye nānapakkārā sakupasaṅghā madhurassarena vikūjantā vicaranti. Sakala-Lumbinivanaṃ Cītalatāvana-sadisāṃ ahoṣi.

(c) Tada ca Bharukacchavāṇijā nāvāya Suvaṇṇabhūmiṃ gacchanti. Ath' eko makaro uppatitvā nāvāya patanto nāvāṃ bhindī. Te vāṇijā phalake nipajjitvā yathāvatāṃ gacchantā Nāgaḍipam pāpupimsu.

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## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following:—

A

5

ارايست الذى يكدب بالدين - فذلك الذى يدع اليتيم - ولا يحض على  
 طعام المسكين - فويل للمصلين - الذين هم عن صلاتهم ساهون - الذين هم بآثر  
 ريمنعون الماعين \*

B

5

أمن الرسول بما أنزل إليه من ربه والمؤمنون - كل آمن بالله وملكته  
 وكتبه ورسله - لا نفق بين أحد من رسله - وقالوا سمعنا وأطعنا - غفرناك  
 ربنا وإليك المصير - لا يكلف الله نفساً إلا ريسها \*

من احوال الامام الشافعى رح - هو ابو عبد الله محمد بن ادريس بن  
 العباس بن عثمان بن شافع عالم قرش وفخرها وامام الشريعة وحبرها - ولد  
 بالمدينة غرة سنة ١٥٠ هـ وحمل إلى مكة ونشأ بها - كفلة امه وذو قرابته



من قرّش - حفظ القرآن وهو ابن تسع سنين - وكان مولعا بالذكور والشعر  
اللغة ورحل الى البادية فنى طلبها \*

2. Answer any FOUR of the following:—

20

(a) Re-write the extract 1. C with vowel-points.

(b) Give the opposite number of any FIVE of the following:—

صلوة - يتيم - طعام - ملئكة - امام - احوال - رب - ثياب

(c) Mention the صيغة of the following:—

نفق - انزل - يمنعن

(d) Form امر. حاضر معروف واحد - يحذف - سمع - يكذب from امر. حاضر معروف واحد  
تقبل and يستنصر

(e) Mention the peculiarities of the باب استفعال with examples.

(f) Make sentence with the حرف which being prefixed to مضارع  
apply to its final letter.

3. Translate into English the extract (a) and either (b) or (c):—

(a) 8

الا انما الدنيا كالحام نائم \* وما خير عيش لا يكون بدائم  
تأمل اذا ما نلت بالامر لذة \* فافئتها هل انت الا كالحام  
فمن غافل عنه وليس بغافل \* ومن نائم عنه وليس بنائم  
سالت عن الدنيا الدنيا قيل لى \* هى الدار فيها الدائرات تدور

(b) 7 زعموا ان جماعة من القردة كانوا سكنا فى جبل - فطلبوا فى ليلة باردة

ذات رياح و امطار نار فلم يجدوا - فرأوا يراعة تطير كانها شرارة نار - فظنوها نار -  
فجمعوا حطباً كثيراً والقوه عليها وجعلوا ينفخون طمعا ان يوقدوا ناراً يصطلوا بها  
وكان قريبا منهم طائر على شجرة ينظرون اليه و ينظر اليهم - وقد رأى ما  
صنعوا - فجعل يناديهم ويقول لا تتعبوا فان الذى رايتوه ليس بنار \*

7 (c) كان شيخ معروف بالشيخ الكرمانى شاعرا على زى الفقراء عليل العينين - و كان يصنع الاككال و يبيع الطالبين - فاشترى منه احد يهما ككلا بدرهم و راي المشتري ان عينه عليقة - فاعطاه درهمين - و قال هذا ثمن ككلك و هذا الاخر لك اشتريه انت ككلا و ككل عينيك - فاستحسن الشيخ ذلك \*

4. Either, Reproduce the story of المهدى و الاعرابى. 10

Or, Narrate the customs of the Chinese people as given in your text-book.

5. Correct and re-write the following with vowel-points:— 10

(a) كان زنديك اسد (b) يا غلام انك صادق

(c) جاءنى مسلمون بغداد (d) رايت احد عشر رجلا

(e) ان تجلس اجلس

6. Write notes on any THREE of the following:— 10

(a) اصحاب الفيل (b) ليلة القدر (c) عثمان بن عفان  
(d) المأمون (e) الحجاج

7. Translate into Arabic:— 25

- I will not go to the madrasah to-day.
- Give up this foolish talk.
- That man whom I saw yesterday came to us.
- Zaid travelled alone from one country to another.
- If you pass by his house, tell him that I am ill.
- About a thousand persons assembled in the meeting.
- We knew that Ahmad would arrive in time.
- He beat his son bound to instruct him.
- By God I will never do such a thing again.
- Verily those who believe and act righteously shall go to Paradise and remain there for ever.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any ONE of the following:—

10

## A

ارسل قيصر رسولا الى عمر بن الخطاب رضى الله عنه لينظر احواله ويشاهد افعاله فلما دخل المدينة سال اهلهما وقال اين ملككم فقالوا ما لنا ملك بل لنا امير قد خرج الى ظاهر المدينة فخرج الرسول فى طلبه فراه ناظما فى الشمس على الارض فوق الرمل الحار وقد وضع درته كالرسادة والعرق يسقط من جبينه الى ان قد بل الارض فلما راه على هذه الحالة وقع الخشوع فى قلبه وقال رجل يكون جميع الملوك لا يقر لهم قرار فى هيئة وتكون هذه حالته و لآنك يا عمر عدلت فتمت و ملكنا يجور فلا جرم انه لا يزال ساهرا خائفا \*

## B

العلم تخدمه بنفسك دائما و المال يخدم عنك فيه نائب  
و المال يسلب او يبديد لكادث و العلم لا يخشى عليه سالب  
و العلم نقش فى فؤادك راسخ و المال ظل عن فنائك ذاهب  
هذا على الاتفاق يغزر فيضه ابدار ذاك حين ينفق ناضب

2. *Either, Give in Arabic a short account of Anūshīrwān and his justice.*

10

*Or, Describe in Arabic Sindbād's first voyage.*

3. Answer any FOUR of the following:—

25

(a) Define غير منصرف and illustrate with examples.

(b) Give the تعليل of the following words:—

يَزِن - جَاء - سَيِّد - فُزْنَا - قِ

(c) Analyse the following according to Arabic grammar:—

ومن طلب العلى من غير كد اضع العمر فى طلب المال

(d) Use the following verbs in short sentences of your own:—

طلع - مال - خاف - استعفر - يستعين

(c) Enumerate the **حروف استثناء** and illustrate them in short sentences, indicating their **اعراب**

4. Translate into English:—

80

كان حاتم الاصم رجلا كثير العيال فقير الحال لا يملك حبة واحدة فجلس ذات ليلة يتحدث مع اصحابه فتعرضوا لذكر الحج فدخل الشوق قلبه ولما دخل على اولاده وجلس بينهم يحدثهم قال لهم لو اذنتم لا بكم ان يذهب الى البيت المقدس فى هذا العام حاجا ماذا عليكم لو فعلتم - فقالت زوجته واولاده انت على هذه الحالة لا تملك شيئا ونحن على ما ترى من شديد الفاقة فكيف تتركنا - وكان له ابنة صغيرة فقالت ماذا عليكم لو اذنتم له دعوة يذهب حيث يشاء فانه متناول للرزق وليس برزاق فذكرتهم ذلك فقالوا صدقت والله هذه الصغيرة انطلق يا ابانا حيث اجبت \*

5. Translate into Arabic any TEN of the following:—

25

- Zayd gave me a book, a pen, and some money.
- I received a letter from my mother.
- A beautiful flower was presented to me by my sister.
- The school in which I study is near my house.
- I bought two maunds of rice.
- The mango is the best fruit of our country.
- How generous is my friend!
- Would that I had learnt Arabic.
- Alas! Life is too short.
- He is not able to go on the pilgrimage.
- If you will help me, I will help you.
- Wherever he will go, I shall follow him.

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## COMPULSORY PAPER

“ (GROUP A)

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any ONE of the following extracts:— 12

## A

بنالبد درویشی از ضعفِ حال  
 بر تَذَدُّخِی خداندِ مال  
 نه دینار دادش سیئه دل نه دانگ  
 برو زد بسر باری از طیره بانگ  
 دل سائل از جور او غم گرفت  
 از غم بر آورد و گفت ای شکفت  
 توانگر ترشروی بی است  
 مگر می نترسد ز تلفی خواست  
 بفرمود کوتاه نظر تا غلام  
 براندش بزاری و زجر تمام  
 بزناکاردن پروردگار  
 میدم که بر گشت ارو روزگار

## B

دور ز امصار و قری یک شبان  
 بود بصعرا ز همه بر کزان  
 خاطرش از فکر جهان بود زاد  
 بود دلش از همه آسود و شاد  
 از اثر برقلمون زمین  
 بر سر او گشته بذقشه سمن  
 طول تجارب عمر ازیں روزگار  
 کرده بدش پُر خرد و هوشیار  
 در همه ایام ز صیف و شتا  
 گله خرد را بنمودی چرا  
 باز شبانگاه در آخر به بنده  
 می بردی زرد همه کوسپند

2. (a) What is the force of “ی” in “تلفی” and “باری” ? 2

(b) Explain the formation of the following compound words:— 4

خداوند - توانگر - روزگار - هوشیار

3. Either, Give the summary of the story beginning with:— 10

شنیدم که یکپخته اسن السبیل \* نیامد بهممانسرای خلیل

Or, Give the substance of the discourse (from 'Attār) on زندگانی خوش

4. Answer any FOUR of the following questions:— 20

(a) Give the uses and meanings of “ی” or “ی” with examples.

(b) State the rules for the formation of مضارع in Persian, with examples.

(c) Form مضارع معروف and امر حاضر معروف from the following:—

رفتن - گفتن - کردن - خوردن - زدن

(d) Give the singular or plural, as the case may be, of the following words, with their meanings:—

نفس - اطوار - اقوال - عیب - بیت

(e) Define لازم فعل مجهول, فعل معروف, فعل متعدی, and لازم فعل متعدی.

(f) Form words with the following suffixes:—

مند - فام - سار - زار - گون

5. Translate into English any two of the following extracts:-- 18

### A

بازرگانی را هزار دینار خسارت افتاد - پسر را گفت نباید که با کسی این درمیان نهی -  
گفت ای پدر فرمان تراست نگویم - ولیکن باید که مرا بر فائدهٔ این مطلع گردانی که  
مصلحت در نهان داشتن چیست - گفت تا مصیبت در نشود یکی نقصان مایه و دوم شامت  
• • سایه \*

بیت

منو انده خویش با دشمنان \* که لا حول گویند شادی کنان

### B

با آنکه سی سال کامل از وفات پدرم علیه الرحمۃ گذشته - بازم گمان میرود دو هفته  
بیش نرفته - میفرمود ای جان پدر - تو هفت سالگی و من هفتاد ساله - رندانی که تا  
غایت امروز چه زنج و درد کشیده ام - و چه گرم و سرد چشیده - تا بضرورت تجربتی  
چند آموخته ام - و اینک از آنهمه یکی را در عوض میراث بقو بیاموزم \*

### C

اطلاعاتیکه کلمبس در خصوص نقشهجات تحصیل کرده بود ویرا شایق و مایل بدین  
نمود - که جد و جدی تمام و مساعی ما لا کلام بعمل آورده - و مخولات اشخاص جهان  
دیده را که بیشتر از مسموعات نقشه سازان مطلع و مخبر بودند بدست بیارد - و خود را از  
هر جهت بصیر و خبیر سازد - و چون استطاعتش قلیل و مالیه اش بنهایت اندک می بود  
همین قدر می توانست که سد جوع نماید \*

6. Either, Describe the early career of کلمبس 9

Or, Explain the following lines:—

هست بتفتگاه دل جاوه قرب روز و شب

لیک بجلوه چنان چشم خیال کی رسد

زان چمنی که بلبلش روح قدس نمی سزد

گلفنیاں خاک را بوی وصال کی رسد

توسن چابکل سبک عرصه کوی نیکوان

• آنکه فتاد مرکبش بر سر حال کی رسد

7. Correct the following:—

5

زید فردہ از دہلی آمد۔ اسم شہا کیست ؟ - من و تو اینجا روم - کتابان را خواندہ  
ام - مردمان رفته شدند

8. Translate into Persian:—

25

(a) Ahmad is a nice boy. He gets up early in the mornings. He says his prayers in time. He then opens his books and prepares his lessons. He is very much liked by his teachers. He always stands first in his class. God bless him.

(b) India is our home. We love it, as others love their own. Let us all try for the progress of our country. The happiness of a country depends upon education.

[[ALTERNATIVE] GROUP B]

[Alternative questions for candidates unsuccessful in the  
1934 Examination.]

[Questions 1, 2, 3, 5, and 6 of GROUP B are alternative to  
Questions 1, 2, 3, 5 and 6 of GROUP A, while Questions 4, 7,  
and 8 of GROUP A are compulsory.]

1. Translate into English any ONE of the following extracts:— 12

### A

یکی در بیابان سگی تشنه یافت \* برون از رفق در حیاتش نیافت  
کله دلو کرد آن پسندیده کیش \* چو جبل اندران بست دستار خویش  
بغدمت میان بست و بازو کشاد \* سگ ناتوان را دمی آب داد  
خبر داد پیغمبر از حال مرد \* که داور گناہان او عفو کرد  
الا گر جفاکاری اندیشه کن \* کرم پیشہ گیر و وفا پیشہ کن  
کسی با سگی نیکی نمی نکرد \* کجا کم شود خیر یا نیک مرد

### B

نمودم سوال از قوی پنجه \* چه پیش آمدت کابنہین رنجه  
ترا دیدہ بودم ازین پیشتر \* زبون بود در پنجهات شیر نر  
چه شد چیردستی و کورفرست \* کہ اکنون فرو خفته در گل خرت  
بدینگونه زرد و نزاری کنوں \* کہ چوں گاہ از کهریابی زبون  
لکد کوب از پشه گردد ننت \* چه شد زور بازی پیل انگذت  
بگفتا کہ از گردش روزگار \* مگر نیستی آگہ ای ہوشیار

2. (a) To what class of حرف does لا belong? Give two other instances  
of its kind. 2

(b) Form sentences to illustrate the use of the following expressions ;—4  
بیابان - پیل افکن - میان بستن - بازو کشادن



10. *Either*, Give the substance of the discourse (from Attār) on سیرت ملوی

Or, Summarise حکایت بیوه زن با حضرت امیر

## A

4. Translate into English any Two of the following extracts :— 13

یاد دارم که در ایام طفلی متعبد بودم و شب خیز - و صبح بزه و پرهیز - شبی در خدمت پدر نشسته بودم - و همه شب دیده بهم نیسته - و مصحف عزیز در کنار گرفته - و طائفه گرد ما خفته - پدر را گفتم - از ایشان یکی سر بر نمی‌دارد که دو گانه بگذارد - چنان خفته اند که گویی مرده اند - گفت - ای جان پدر اگر تو نیز بتغلی به از آنکه در پوستین خلق افتی \*

## B

دزدی بطمع نوائی بکلبه بینوائی در آمد - جز دیگی و پارگی کلبه‌ی که فقیر بر خود پیچیده بود نیافت - دیگ را برداشت و بیرون شد - فقیر بر خاست و عقب او رفت - دزد دید که فقیر بد مجالش می آید - گفت فقیرم چه اراده داری - گفت - اراده کوچ - تو دیگ را برداشتی من کلیم - دزد بغندید و دیگ را بر زمین نثار و رفت \*

## C

گناهگاری را پیش خلیفه آوردند - خلیفه بعقوبتی که مستحق آن شده بود فرغان داد - گفت - ای امیر المؤمنین - انتقام بر گناه عدلست - و تجاوز از آن فضل - و پایه همت امیر المؤمنین عالی تر است که از آنچه بلندتر است تجاوز نماید - و بآنچه فروتر است فرود آید - خلیفه را ستم وی خوش آمد - گناه وی را عفو کرد \*

5. *Either*, Give a brief description of رود نیل or اصفهان. 9

Or, Explain the following lines :—

یاران که بوده اند ندانم کجا شدند  
یا رب چه روز بود که از ما جدا شدند  
گر نو بهار آید و پرسد ز دوستان  
گو ای صبا که آن همه گلها گیا شدند  
ای گل چو آمدی ز زمینی که چگونه اند  
آن رویها که در نه گرد فنا

## ADDITIONAL PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English ONE of the following :—

10

(a) یکے از ملوک عرب زنجور بود ' در حالت پیریه امید از زندگانی قطع کرده ' ناگاه سوارے درآمد و گفت ' بشارت باد مر ترا که فلان قلع را بدولت خداوندی کشادیم و دشمنان را اسیر گرفتیم و سپاه و رعیت آن طرف بجملمگی مطیع فرمان شدند ' ملک نفسے سرد بر آورد و گفت " این مژده مرا نیست دشمنانم راست یعنی وارثان ملک را " \*

(b) درویشے را پرسیدند که راحت دنیا را در چه دانی ؟ گفت " در دو چیز " اول توشه که از رحمت حاکم باز دارد دوم گوشه که از زحمت خلغم بے نیاز آرد " گفتند " اگر در قبول یکے ازین دو مغفارت شوی کدام یک اختیار کنی ؟ " گفت ' قبول گوشه کنم و ترک توشه گویم زیرا که زهر مجاعتی چشیدم اولی تر از ممت جماعتے کشیدم ' \*

(c) هر سرب که داری با دوست در میان منبه ' چه دانی که وقتی دشمن گردد ' و هر بدی که توانی کرد بدشمن مرساں ' باشد که روزے دوست گردد ' رازے که خواهی نهان ماند با کسی در میان منبه ' اگرچه معتد بود ' که هیچ کس بر سرتو از تو مشفق تر نباشد ' \*

بیت \*

خامشی به که ضمیر دل خویش با کسی گفتن و گفتن که مگوی

2. Write short notes on any two of the following :-

10

سعدی . قانوی ، عطار ، امیر خسرو

3. Translate any two into English :-

80

(a) خواجه غلامے داشت پارسا و خدا ترس ' ناگاه این خواجه بیمار شد ' عهد کرد با خدا که اگر این بیماری خلاص شود این غلام را آزاد کند ' حق تعالی او را شفا داد ' خواجه دل در غلام بسته بود او را آزاد نه کرد و دیگر باره بیمار شد ' غلام را گفت " برو طبیب را بیار تا مرا علاج کند " غلام بیرون رفت و درآمد ' خواجه گفت " طبیب کو ؟ " غلام گفت " طبیب می گوید که از مغالفت من می کند و بدانچه می گوید وفا نمی کند من او را علاج نمی کنم " خواجه متنبه شد و گفت ' اے غلام طبیب را بگو که از مغالفت باز گشتم و از عهد شکنی توبه کردم " غلام گفت " اے خواجه طبیب می گوید اگر تو صفت وفا پیش آری ما نیز شفا خواهیم داد " خواجه غلام را آزاد کرد و شفا یافت \*

(b) آورده اند که ملکی بود در ملکی عجم خداوند تاج و تخت و علم که نام او آزاد بخت بود و ده وزیر داشت و یکی سپهسالار، سپهسالار را دختره بود صاحب جمال، اتفاقاً روزی به سیر و سیاحت رفت، تمنائے دختر گریبان دلش بگرفت و معتمدی را فرستاد تا دختر را بنزد او آورند، چون قاصد به شهر رسید آرزومندی پدر را به دختر شرح داد و دختر هم در آرزوی دیدار پدر بود و خدمت را فرمود تا اسباب رفتن مهیا ساختند، قضا را بادشاه با خدم و حشم بیرون آمده بود و در شکار مشغول بود ناگاه چشم شاه بر رخسار آن دختر افتاد، دلش شکار شده، میدی می طلبید میدی دختر شد \*

(c) بدان ای عزیز! زهار بغیر حق اعتماد ممکن تا پشیمان نه شوی، از حق غافل مباش تا شیطان بر تو راه نه یابد، به هیچ چیز مغرور مشو تا هلاک نه گردی، دل از حرص خالی کن تا راحت یابی، در کار حق باش تا کار تو ساخته گردد، جز حق و راست مگو تا خسته نگردی، کس را عیب ممکن تا به عیب مبتلا نگردی، در تنگیها صبر کن تا کشایش یابی، طمع از دل دور کن تا خوار نگردی، کلام به اخلاص کن تا جزا بابی، غم دنیا مغرور تا دل تو تباه نه شود، آزار کس مغرور تا امان یابی، کسی را به حقارت مغرور تا خوار نه شوی.

4. Define, with examples, any two :

اسم ظرف، اسم آله، اسم تصغیر

5. Explain either *افزاد* or *اضافه* and give examples. 5

6. *Either*, How do you form the passive voice? Give examples. 5

Or, Give various moods of a verb, and illustrate them with examples.

7. Translate the following into Persian :— 35

a) God is one. There is none like Him. He made the earth and heaven. He created men, animals and other things. He is very kind to His servants. He rewards us if we obey Him and do a good deed. He punishes us if we disobey Him and do a bad deed.

(b) We must speak the truth. To speak a lie may, for the time being, bring us some good ; but we suffer a great deal in the long run. Truth-speaking may, temporarily, do us some harm ; but in the end we are benefited thereby.

## LATIN

*Paper-setter*—MR. W. C. WORDSWORTH, M.A.

*Examiners*— { MR. E. C. CHIPPENDALE, B.A.  
 „ NIRMALCHANDRA MITRA, M.A.

## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate :—

25

- (a) 'O lux Dardaniae, spes o fidissima Teucrum, quae tantae tenuere morae? quibus Hector ab oris expectate venis? ut te post multa tuorum funera, post varios hominumque urbisque labores defessi aspicimus! Quae causa indigna serenos foedavit vultus? aut cur haec vulnere cerno?' ille nihil, nec me quaerentem vana moratur, sed graviter gemitus imo de pectore dicens 'heu fuge, nate dea, teque his' ait 'eripe flammis. hostis habet muros, ruft alto a culmine Troia. sat patriae Priamoque datum: si Pergama dextra defendi possent, etiam hac defensa fuissent. sacra suosque tibi commendat Troia Penates: hos cape fatorum comites, his moenia quaere, magna pererrato statues quae denique ponto.'
- (b) Atque ubi iam patriae perventum ad limina sedis antiquasque domos, genitor, quem tollere in altos optabam primum montes primumque petebam, abnegat excisa vitam producere Troia exsiliumque pati. 'vos o quibus integer aevi sanguis' ait 'solidaeque suo stant robore vires, vos agitate fugam. me si caelicolae voluissent ducere vitam, has mihi servassent sedes. satis una superque vidimus excidia et captae superavimus urbi. sic o sic positum affati discedite corpus. ipse manu mortem inveniam; miserebitur hostis exuviasque petet. facilis iactura seculi. iam pridem invisus divis et inutilis annos demoror, ex quo me divum pater atque hominum rex fulminis afflavit ventis et contigit igni.'

(c) Ea res est Helvetiis per indicium enuntiata. Moribus suis Orgetorigem ex vinculis causam dicere coegerunt: damnatum poenam sequi oportebat, ut igni cremaretur. Die constituta causae dictionis Orgetorix ad iudicium omnem suam familiam ad hominum milia decem undique coegit et omnes clientes obaeratosque suos, quorum magnum numerum habebat, eodem conduxit: per eos, ne causam diceret, se eripuit. Cum civitas ob eam rem incitata armis ius suum exsequi conaretur, multitudinemque hominum ex agris magistratus cogerent, Orgetorix mortuus est: neque abest suspicio, ut Helveti arbitrantur, quin ipse sibi mortem consciverit.

(d) Dum haec in colloquio geruntur, Caesari nuntiatum est equites Ariovisti propius tumultum accedere et ad nostros adequitare, lapides

telaque in nostros conicere. Caesar loquendi finem facit, seque ad suos recepit suisque imperavit ne quod omnino telum in hostes reicerent. Nam etsi sine ullo periculo legionis delectae cum equitatu proelium fore videbat, tamen committendum non putabat ut pulsus hostibus dici posset eos ab se per fidem in colloquio circumventos. Posteaquam in vulgus militum elatum est, qua arrogantia in colloquio Ariovistus usus omni Gallia Romanis interdixisset, impetumque in nostros eius equites fecissent, eaque res colloquium ut diremisset, multo maior alacritas studiumque pugnandi maius exercitui iniectum est.

2. What circumstances compelled Caesar's Intervention in the affairs of the Gauls? What were the chief Gallic peoples, and where were their territories? If you can mark their positions on a map, do so. 6

Or,

3. What names in France to-day are derived from the Gauls of Caesar's time?

4. Summarize in from 200 to 250 words the narrative of the fall of Troy as given in the second book of the *Aeneid*. 6

Or,

5. Write brief notes to explain—*Penates, Pergama, Argolica gens, Pelasgi, testudo, numen, Myrmidones, religio, Palladium*.

6. Account for the cases of *expectate, flammis*, his (l. 14) in Question 1 (a), and the subjunctives *reicerent, interdixisset, diremisset* in Question 1 (d). 5

7. Give the present and perfect participles of *conor, utor, iacio, duco, figo, capio, iubeo, ardeo*.

8. What cases follow --*utor, nubo, similis, prosum, interest*? Give examples. 4

9. Translate :—

(a) *Fight at a ford of the Thames—possibly Brentford.* 25

Eo quum venisset animum advertit ad alteram fluminis ripam magnas esse copias hostium instructas ripa autem erat acutis sudibus praefixisque munita eiusdemque generis sub aqua defixae sudes flumine tegebantur his rebus cognitis a captivis perfugisque Caesar praemisso equitatu confestim legiones subsequi iussit sed ea celeritate atque eo impetu milites ierunt quum capite solo ex aqua exstarent ut hostes impetum legionum atque equitum sustinere non possent ripasque dimitterent ac se fugae mandarent.

(b) *Manlius, who saved the Capitol, was afterwards condemned to death for aiming at the kingdom. Ovid laments this. Speaking of a temple of Juno on the Capitol, he says :*

Ante domus Manli fuerat : qui Gallica quondam  
a Capitolino reppulit arma Iove.

quam bene, di magni, pugna cecidisset in illa  
defensor solii, Iupiter alte, tui!

vixit, ut occideret damnatus crimine regni :  
hunc illi titulum longa senecta dabat.

10. Translate into Latin :—

25

(a) It is agreed by all that he was a good general.

(b) The river was so deep that even the horses could not cross.

(c) The storm prevented the ships from reaching port.

(d) As the enemy had been defeated there was no reason why the army should not return to the city.

(e) Putting Labienus in charge of the camp, Caesar led the rest of the soldiers into the lands of the Aedui.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate\*full marks.*

## 1. Translate :—

10

(a) Ubi ea dies quam constituerat cum legatis venit, et legati ad eum reverterunt, negat se more et exemplo populi Romani posse iter ulli per provinciam dare; et si vim facere conentur prohibitorum ostendit. Helvetii, ea spe deiecti, navibus iunctis ratibusque compluribus factis, alii vadis Rhodani, qua minima altitudo fluminis erat, nonnumquam interdiu, saepius noctu si perrumpere possent conati, operis munitione et militum concursu et telis repulsi hoc conatu destiterunt.

(b) Excutor somno, et summi fastigia tecti  
ascensu supero atque arrectis auribus asto:  
in segetem veluti cum flamma furentibus Austris  
incidit, aut rapidus montano flumine torrens  
sternit agros, sternit sata laeta boumque labores,  
praecipitesque trahit silvas; stupet inscius alto  
accipiens sonitum saxi de vertice pastor.  
tum vero manifesta fides, Danaumque potescunt  
insidiae. iam Deiphobi debet ampla ruinam  
Vulcano superante domus, iam proximus ardet  
Ucalegon, Sigea igni freta lata relucet.  
exoritur clamorque virum clangorque tubarum.  
arma amens capio; nec sat rationis in armis,  
sed glomerare manu bello et concurrere in arcem  
cum sociis ardent animi; furor iraque mentem  
praecipitant, pulchrumque mori succurrit in armis.

2. How was a Roman army constituted in Caesar's day? Who were permitted to serve in the legions, and what other kinds of troops were there? 5

Or,

3. Give a brief description of Gaul in Caesar's time. 5

4. Translate and explain the construction of—

- (a) Referes ergo haec et nuntius ibis  
Pelidae genitori.  
(b) Occiderit ferro Priamus? Troia arserit igni?  
(c) Mene offerre pedem, genitor, te posse relicto  
sperasti, tantumque nefas patrio excidit ore?  
(d) Quid tantum insano iuvat indulgere dolori.

Or,

5. Scan any EIGHT lines of 1 (b). 5

6. Translate into English :— 30

(a) Hannibal evacuates Italy after sixteen years. The Carthaginians ask for peace terms.

Scipio his conditionibus dedit ne amplius quam xxx naves haberent ut 10 millia pondo argenti darent: captivos et perfugas redderent. In-

terim Hannibale veniente ad Africam, pax turbata ets, multa hostilia ab Afris facta sunt: legati tamen eorum ex urbe venientes a Romanis capti sunt, et iubente Scipione, dimissi. Hannibal quoque frequentibus proeliis victus a Scipione, petit etiam ipse pacem. Cum ventum esset ad colloquium, iisdem conditionibus data est, quibus prius; addita quingentis millibus pondo argenti c millia librarum, propter novam perfidiam. Carthaginensibus conditiones displicuerunt, iusseruntque Hannibalem pugnare. Infertur a Scipione et Masinissa, alio rege Numidarum qui amicitiam cum Scipione fecerat, Carthagini bellum.

- (b) *The clan of the Fabii took upon themselves the war against Veii. Forming an army of 302 they marched out of the city. At first successful they became rash. They fall into an ambush and, brought to bay like a wild boar, are all slain.*

Sic 'Fabii vallē latis discursibus implent  
 quosque vident, sternunt: nec metus alter inest.  
 quo ruitis, generosa domus? male creditis hosti.  
 simplex nobilitas, perfida tela cave!  
 fraude perit virtus. in apertos undique campos  
 prosiliunt hostes, et latus omne tenent.  
 quid faciant pauci contra tot milia fortes?  
 quidve, quod in misero tempore restet, habent?  
 sicut aper, silvis longe latratibus actus,  
 fulmineo celēres dissipat ore canes;  
 mox tamen ipse perit, sic non moriuntur inulti:  
 vulneraque alterna dantque feruntque manu.

7. Translate into Latin:—

30

(a) A battle was fought at the foot of the mountain, after which the enemy retreated very quickly into the forest where they lay hid for several days.

(b) Some days after he reached Rome he had an interview with the consul and gave him the message he had been told to give.

(c) While these things were going on the senate was busy considering what answer should be given to the king.

(d) The light armed troops attacked the rearguard and killed many before darkness put an end to the fighting.

(e) He so admired his prisoner that he ordered his chains to be struck off and whatever he wanted to be given to him. Three months later he sent him back to his own country with an abundance of presents.

8. How are diminutives formed in Latin? Give examples. 5

9. Give the principal parts of—*cado, attingo, infringo, incendo, nescio, nitor, prohibeo, traho, ardeo, nemo.* 5

10. Explain and illustrate the use of—*dum, quum, quin.* 5

11. Give the Latin for—within three months, after two days, he is hated by the citizens, at dawn, towards sunset, foot by foot, he lives in Rome, it is to his interest, do not do this, he is sorry for what he did. 5

## FRENCH

*Paper-setter & Examiner--REV. FATHER E. POPULAIRE, S.J.*

## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate ONE of the following passages :—

9

(a) En quelque endroit que j'aie il faut fendre la presse  
D'un peuple d'importuns qui fourmillent sans cesse.  
L'un me heurte d'un ais dont je suis tout froissé ;  
Je vois d'un autre coup mon chapeau renversé.  
Là, d'un enterrement la funèbre ordonnance  
D'un pas lugubre et lent vers l'église s'avance ;  
Et plus loin des laquais l'un l'autre s'agacants,  
Font aboyer les chiens et jurer les passants.

(b) Un pauvre clerc du parlement,  
Arraché du lit brusquement  
Comme il dormait profondément,  
Gagne l'étude tristement,  
Y griffonne un appointement  
Qu'il ose interrompre un moment  
Pour déjeuner sommairement,  
En revanche écrit longuement,  
Dîne à trois heures sobrement,  
Sort au dessert discrètement,  
Reprend la plume promptement  
Jusqu'à dix heures . . . seulement.

2. Translate two of the following passages :—

18

(a) Alors, de male rage, le vieux s'enferma dans son moulin et reçut tout seul comme une bête farouche. Il ne voulut pas même garder près de lui sa petite-fille Vivette, une enfant de quinze ans, qui, depuis la mort de ses parents, n'avait plus que son 'grand' au monde. La pauvre petite fut obligée de gagner sa vie et de se louer un peu partout dans les 'mas', pour la moisson, les magnans ou les olivades. Et pourtant son grand-père avait l'air de bien l'aimer, cette enfant-là ! . . . Il lui arrivait souvent de faire ses quatre lieues à pied par le grand soleil pour aller la voir aux 'mas' où elle travaillait.

(b) Jean ne parla plus de l'Arlésienne. Il l'aimait toujours cependant, et même plus que jamais. Seulement il était trop fier pour rien dire : c'est ce qui le tua, le pauvre enfant ! . . . Quelquefois il passait des journées entières seul dans un coin, sans bouger. D'autres jours, il se mettait à la terre avec rage et abattait à lui seul le travail de dix journaliers. . . . Le soir venu, il prenait la route d'Arles, et marchait devant lui jusqu'à ce qu'il vît monter dans le couchant les clochers grêles de la ville. Alors il revenait. Jamais il n'alla plus loin.

(c) C'est sur ma petite colline verte qu'il est venu rêver aujourd'hui. . . . Il est là, debout contre un pin, son tambour entre ses jambes, et s'en donnant à cœur joie. . . Des vols de perdreaux effarouchés partent à ses pieds sans qu'il s'en aperçoive. La fêrigoule embaume autour de lui, il ne la sent pas. Il ne voit pas non plus les fines toiles d'araignée



qui tremblent au soleil entre les branches, ni les aiguilles de pin qui sautillent sur son tambour. Tout entier à son rêve et à sa musique, il regarde amoureuxment voler ses baguettes, et sa grosse face niaise s'épanouit de plaisir à chaque roulement. •

3. Describe shortly the circumstances of time and place in which Daudet wrote the *Letters de mon moulin*. 7

4. (a) Parse the italicized words in the three passages of Question 2. 10

(b) Translate the following idiomatic expressions:—*à voix basse*, *la tête basse*, *au ras de l'eau*, *papier ministre*, *avoir beau faire*, *eau-de-vie*. 6

5. Give the plural of—*près de l'église il y a un grand arbre ; leur bateau leur manque ; le bijou a coûté cher ; je l'ai invité chez lui ; je lui écrirai une longue lettre*. 10

6. Re-write the following passage, substituting the appropriate tenses for the infinitives in italics: underline your changes:—*Je retourner m'asseoir à la table ; la bougie tirer à sa fin. Je regarder le papier que je devoir signer, et je le regarder sans horreur, j'être vaincu. Un bruit, cependant, me faire tressaillir, me tirer brusquement de la rêverie où j'être plongé. Je tendre l'oreille*. 10

7. Translate into English:— 30

(a) Le soleil déclinait à le soir prompt à le suivre  
Brunissait l'horizon ; sur la pierre d'un champ,  
Un vieillard qui n'a plus que peu de temps à vivre,  
S'était assis pensif, tourné vers le couchant.  
Maintenant, riche et vieux, l'âme du passé pleine,  
D'une grande famille aïeul laborieux,  
Tandis que ses troupeaux revenaient dans la plaine,  
Détaché de la terre, il contemplait les cieux.  
Le jour qui va finir vaut le jour qui commence.  
Le vieux penseur rêvait sous cet azur si beau,  
L'océan devant lui se prolongeait immense  
Comme l'espoir du juste aux portes du tombeau.

(b) Durand est harassé, il n'avance plus qu'avec peine, et un faux pas l'ayant fait tomber à terre, c'est en vain, malgré l'aide de son camarade, qu'il tente de se remettre sur pied. Force leur est à tous deux de s'asseoir sur le talus d'un fossé et d'attendre là qu'une âme charitable attirée de ce côté veuille bien compatir à leur sort. A la tombée du jour, un colporteur (*hawker*) qui passe les salue en effet avec bienveillance, mais dans un langage qu'ils ne saisissent pas. Ils lui répondent en français, cherchant à savoir où ils se trouvent, et leur surprise est grande de se voir compris et d'apprendre qu'ils sont en pays hollandais. En quelques mots le marchand ambulant est mis au courant de leur situation. 'Prenez courage,' leur dit-il en s'éloignant, 'on va vous prêter secours!'

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

## 1. Translate ONE of the following passages :—

9

- (a) Depuis trois ans, je vous conjure  
De m'apporter un souvenir  
Du vallon où ma vie obscure  
Se berçait d'un doux avenir.  
Au détour d'une eau qui chemine  
À flots purs, sous de frais lilas,  
Vous avez vu notre chaumine.  
De ce vallon ne me parlez-vous pas?  
L'une de vous peut-être est née  
Au toit où j'ai reçu le jour ;  
Là d'une mère infortunée  
Vous avez dû plaindre l'amour.  
Mourante, elle croit à toute heure  
Entendre le bruit de mes pas ;  
Elle écoute, et puis elle pleure.  
De son amour ne me parlez-vous pas?

- (b) Combien de patrons morts avec leurs équipages!  
L'ouragan de leur vie a pris toutes les pages,  
Et d'un souffle il a tout dispersé sur les flots!  
Nul ne saura leur fin dans l'abîme plongée.  
Chaque vague en passant d'un butin s'est chargée ;  
L'une a saisi l'esquif, l'autre les matelots!  
Nul ne sait votre sort, pauvres têtes perdues!  
Vous roulez à travers les sombres étendues,  
Heurtant de vos fronts morts des écucils inconnus.  
Oh! que de vieux parents, qui n'avaient plus qu'un rêve,  
Sont morts en attendant tous les jours sur la grève  
Ceux qui ne sont pas revenus!

## 2. Translate TWO of the following passages :—

16

(a) Quand la chèvre blanche arriva dans la montagne, ce fut un ravissement général. Jamais les vieux sapins n'avaient rien vu d'aussi joli. On la reçut comme une petite reine. Les châtaigniers se baissaient jusqu'à terre pour la caresser du bout de leurs branches. Les genêts d'or s'ouvraient sur son passage, et sentaient bon tant qu'ils pouvaient. Toute la montagne lui fit fête. Tu penses, Gringoire, si notre chèvre était heureuse! Plus de corde, plus de pieu . . . rien qui l'empêchât de gambader, de brouter à sa guise. . . . C'est là qu'il y en avait de l'herbe! jusque par-dessus les cornes, mon cher! . . .

(b) Ce doit être à midi ; oui, monsieur, en plein midi. . . . Mais, dame! avec la brume de mer, ce plein midi-là ne valait guère mieux qu'une nuit noire comme la gueule d'un loup. . . . Un douanier de la côte m'a raconté que ce jour-là, vers onze heures et demie, étant sorti de sa maisonnette pour rattacher ses volets, il avait eu sa casquette emportée par un coup de vent, et qu'au risque d'être enlevé lui-même par la lame, il s'était mis à courir après, le long du rivage, à quatre pattes. Vous comprenez, les douaniers ne sont pas riches, et une casquette, ça coûte cher.

(c) Quand elle fut bien sûre que je parlais sérieusement, l'hôtesse se mit à aller et venir d'un air très affairé, ouvrant des tiroirs, remuant

des bouteilles, essuyant les verres, dérangeant les mouches. . . . On sentait que ce voyageur à servir était tout un événement. Par moments la malheureuse s'arrêtait et se prenait la tête, comme si elle désespérait d'en venir à bout. Puis elle passait dans la pièce du *font* ; je l'entendais remuer de grosses clés, tourmenter des serrures, fouiller dans la huche au pain, souffler, épousseter, laver des assiettes. De temps en temps un gros soupir, un sanglot mal étouffé. . . .

3. (a) Give in your own words the impression you feel on reading the *Lettres de mon moulin*. 8

(b) Write some historical notes on Daudet and Mistral. 7

4. Write IN THE FEMININE:—*son mari est un Suisse ; mon bienfaiteur est parti ; le vicillard nous a rendu son nouveau cheral ; messieurs les comtes sont des dmis loyaux* ; and IN THE PLURAL:—*souriens-toi de ta grand'mère ; mon œil me fait mal ; je lui ai acheté un joli écentail ; le carnaval est sa joie*. 12

5. Re-write the following, using the appropriate past tenses for the infinitives in italics. Underline your changes:—*Je faire un voyage à Paris, où m'appeler mes intérêts. Je revehir il y a deux jours, et comme j'arriver au château, on me dire que le vieux monsieur m'attendre depuis le matin. Je me rendre à la hâte dans son appartement. Il arrêter sur moi un regard où je croire lire une expression de joie, puis il me faire signe de m'asseoir*. 10

6. (a) Compose sentences, which must be translated, to illustrate the use of—*jusqu'à, jusqu'à ce que, puisque, depuis que, plutôt, plus tôt*. 12

(b) Put into French:—In this village all the houses are at least two stories high. There are some that have three or four stories. A few are quite new, but I prefer the old ones. Every house has a garden, I have never seen anything prettier. In each of the gardens there are beautiful roses. 12

7. Translate into English:— 24

(a) Le soir, au coin du feu, j'ai pensé bien des fois  
A la mort d'un oiseau, quelque part dans les bois.  
Pendant les tristes jours de l'hiver monotone  
Les pauvres nids déserts, les nids qu'on abandonne,  
Se balancent au vent sur le ciel gris de fer.  
Oh ! comme les oiseaux doivent mourir l'hiver !  
Pourtant lorsque viendra le temps des violettes,  
Nous ne trouverons pas leurs délicats squelettes  
Dans le gazon d'avril où nous irons courir.  
Est-ce que les oiseaux se cachent pour mourir ?

(b) La neige venait de recommencer à tomber, et de gros flocons obscurcissaient le jour, lorsque, arrivé près d'Eylau, je me trouvai en face d'un bataillon de la vieille garde, qui, ne pouvant distinguer au loin, me prit pour un officier ennemi conduisant une charge de cavalerie. Aussitôt le bataillon entier fit feu sur moi. Mon manteau et ma selle furent criblés de balles, mais je ne fus pas blessé, non plus que ma jument, qui, continuant sa course rapide, traversa les trois rangs du bataillon avec la même facilité qu'une couleuvre traverse une haie. Mais ce dernier élan ayant épuisé la force de Lisette, cette pauvre bête s'affaissa tout d'un coup et tomba d'un côté en me faisant rouler de l'autre !

## CLASSICAL TIBETAN

*Paper-setter & Examiner*—DR. SATKARI MUKHERJEE, M.A., PH.D.

## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following extracts into English :—

40

(a) གསུམ་པ་གཞན་ལ་དོན་མེད་ཁ་ངན་ཆོག་ངན་ལ་བ་སྐྱུ་དང་། འབྲུག་པ་སྐྱབ་སྐྱུ་  
དང་། བསྐྱར་འཛོལ་སྐྱུ་དང་། ཉམས་བཤུ་སྐྱུ་དང་། སྟོན་བཞེད་སྐྱུ་སོགས་ནི་རང་ལ་དག་  
འཛོལ་བའི་སྐྱུ་ཡིན་ནོ། འདིར་སངས་ཀྱིས་གསུངས་པ་:—

མི་ཞིག་སྤྱི་པར་གྱུར་པ་ཡི།

ཁ་ནས་ལྷ་པོའི་ཆོག་བྱང་ལྟེ།

ཉམས་པར་སྦྱ་བ་སྦྱ་ཆོག་དེས།

བདག་ཉིད་ལ་ནི་གཙོད་པར་བྱེད།

ཅེས་པ་ལྟར་། གཞན་གྱི་ནང་དུ་འཇུག་ལས་དུ་ཐུག་ཀྱང་བྱུང་། ཚུར་ཁ་ངན་ཆོག་  
ངན་ལ་བ་པ་སོགས་གང་གྲས་ཀྱང་འཕྲུལ་དུ་ལན་མི་ཡོག། མ་མཐོང་བ་འདྲ་བོ་གྲས་ནས་འགྲོ་  
དགོས་པ་དང་། གལ་ཏེ་ལར་སྐྱུ་ལ་ཏང་གཞོད་པ་སོགས་མི་འཚམས་པ་བྱས་ཆོ། མི་དབང་  
དང་། ཆོ་གྲངས་དུས་ཆོད་ངེས་པར་བྱས་ཐོག་ཡིན་ཏན་ཅན་དང་ཡ་རབས་བཟང་སྟོད་ལྟ་བུ་  
ནམས་དང་གྲོས་བསྟན་བྱས་ཏེ་ཁྲིམས་སར་གདུག་དགོས་མིན་གྱི་ཞིབ་དབྱེད་ལེགས་པར་བྱེད་  
པ་གནད་ཆེ་བ་ཡིན་ནོ།

(b) ཆོས་ནམས་སྟོན་དུ་ཡིད་འགྲོ་ཡིད་གཙོ་ཡིན།

ཡིད་མགྲོགས་རབ་དུ་དང་བའི་སེམས་ཀྱིས་ནི།

སྦྱས་སམ་བྱས་ན་དེ་ནས་བདེ་བ་དེ།

འཕྲོག་འགྱུར་གྱི་བ་མ་ཡོལ་བར་མི་འགྱུར་བཞིན།

2. Give a summary of the story of the minister and the orphan boy and point out the moral. 10

3. Give the respectful forms of expression for the following words and illustrate them in your own sentences:—

ལུས; མགོ; འགོ་བ; ལྷ; ཁ་ཆེ་མམ། 10

Conjugate any three of the following roots in the past and present tenses and in the imperative mood:—

འཚག; འཚབ; འཛུག; གཏོང; and དཔོང། 9

5. Correct the errors in the following sentence:—

བཞུག་གིས་ཆོག་མཁན་མཇུག་ཤིས་མི་སྤངས་ཞིང་། 6

6. Translate the following passage into Classical Tibetan : - 25

He was a voracious reader and a voluminous writer. His library was worth a princess's dowry. He was for long pressed by relatives and friends to marry and live the orthodox Hindu householder's life ; but he always resisted their importunities. Once in reply to a friend who asked why he preferred to live single he said, 'I do not live single at all, my dear : I count more brides than a thousand nawabs in their harems. Come and look at them'. And he took him to his library and showed him his numerous volumes of books in the glass cases which lined the walls.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following extracts into English:— 40

(a) ཡང་དགེ་སྤྱོད་དག་ཐོན་ཕྱང་བ་འདས་པའི་དུས་ན་རི་བྱགས་ཤིག་དུ་བྱིས་བདག་  
ཤིང་ད་སྟོད་པ་ཞིག་འདུག་པ་དེ་ཡ་དགའ་བྱེད་དང་ས་རི་ཞེས་པའི་སྐང་མོ་གཉིས་ཤིག་ཡོད་  
པ་དེ་གཉིས་ལས་ཐེབ་རེ་འབྲངས་སོ། དགའ་བྱེད་ཀྱི་ཐེབ་ནི་འདེམ་ཡོན་ལ། ས་རི་  
ཐེབ་ནི་ཁྲ་ལུ་ཞིག་ཡོན་བས། གཅིག་གི་མིང་ནི་དགའ་བྱེད་ཅེ་འདེམ་དང་། གཅིག་གི་མིང་  
ནི་ས་རི་ཁྲ་ལུ་ཤེས་བྱ་བར་བདགས་ནི། དེ་གཉིས་སྐང་པོ་ཆེ་གཉིས་སུ་གྱུར་དོ། དུས་གཞན་  
ཞིག་ན་ཤིང་ད་སྟོད་པ་དག་ཆང་གཡ་དུ་ཆོགས་དེ་གཏམ་ཟེར་བ་ན། ཤེས་ཤན་བདག་ཅག་  
ལས་སུ་འི་སྐང་དག་བཟང་ཞེས་སྐྱུ་པ་དང་།

(b) གཞན་གྱི་ཚོག་གིས་མཛེལ་བ་ཤེས་མི་སྤང་ནིང་།

གཞན་གྱིས་སྤྲོས་པ་དག་ལ་བཞག་པར་བྱ།

འབྱེད་པར་འདོད་པ་སྤྲོས་ཚེ་འབྱེད་པས་ན།

སྤྱོད་པ་མ་ཅད་ལ་ཡིད་མི་སྤྱོད་ཀྱ།

(c) གང་དག་བཙམ་ནས་དགར་བྱར་པ།

གང་ཕྱིར་ཞོར་ནི་ཀུན་བསགས་པ།

དེ་དག་བདག་གིས་ཚེས་ས་དང་སྤྱར།

བདག་ནི་ཁྱིམ་ནས་བསྐྱད་པར་བྱར།

2. Give in English a short summary of the story of Manchenpo in your own words. 10

3. Explain the following extract in your own words:— 5

དམ་པ་མང་པོ་ཁྲམ་འཛེས་མི་བྱེད་ལ།

གལ་དེ་དཀའ་བས་ཁྲམ་ནི་སྤངས་བྱར་ན།

ཉོ་ལ་རི་མོ་བྲིས་པ་ལྟ་བུར་ནི།

ཤི་ཡང་གཞན་དུ་བྱེད་པར་མི་འགྱུར་རོ།

4. Conjugate any three of the following roots in the past and future tenses, and in the imperative mood:— 9

འཁྱར་བ; འགེབས་པ; འཆབ་པ; འཐུང་བ; འཇོག་པ།

5. Correct the errors in the following:— 6

མི་ཡི་ཚེས་ལྷག་ལོག་སྤྱད་ན།

ཉུ་གཡལ་གྱི་པ་ཐག་མི་རིང་།

6. Translate the following passage into classical Tibetan:— 30

At the time of the mutiny, when the stability of government was in danger, not only did Bengal stand solidly loyal, not only did local military outbreaks, when they occurred in different parts of Bengal, receive no support or countenance from the local population, who, on the contrary, co-operated heartily with the authorities in suppressing them, but, wherever Bengalees were to be found in other parts of India, government was able to count on their loyalty; and they became the object of the rebels' animosity in the same way as Europeans.

## CLASSICAL ARMENIAN

Paper-setter & Examiner—MR. M. J. SETH, M.R.A.S.

## COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

30

Խնդրեմք ի քէն, արքայ քաջ, ունկն դիր սակաւ բանից մերոց, և քաղցրութեամբ լուր զոր ասելոցս եմք: Վննդի յիշեցուցանեմք քեզ զժամանակն Շապհդ արքայից արքայի, որ էր հայր հաւոն քո էջակերտի, և ետ նմա Նստուած զերկիրն Հայոց ի ժառանգութիւն սովին օրինօք, որով և մեք իսկ վարիմք այժմ, և հարքն մեր և հաւքն հարցն մերոց կացին նմա ի ծառայութեան վաւտակս, և սիրով կատարէին զամենայն հրաման բանի նորա, և բազում անգամ ի նմանէ մեծապարգեւք լինէին: Եւ յայնց ժամա նակաց մինչև ի քո հայրենի աթոռդ՝ և մեք զնոյն ծառայութիւն ծառայեցաք, բայց թերեւ քեզ լաւագոյն քան զառաջնոցն:

2. Translate into Classical Armenian:—

30

History, and the present state of the world, prove, that without a written revelation, men are uncertain about some of the most important truths of religion. A few illustrations may be given.

Apart from revelation, we stand in doubt of the immortality of the soul. We ask with anxiety, will the soul perish with the body in which it lives, or is it an undying principle whose existence is for ever and ever? Nature, it is true, gives some expectation of a future state; but the evidence, taken by itself, is dim and indecisive.

Socrates, the wisest of Greek philosophers, when dying, said to his friends: 'I am going out of the world, and you are to continue in it, but which of us has the better part is a secret to every one but God'.

8. Decline (Հորովեա) the following words:— 10

Վերի, ջուր, մամ, հուր, շուն, մանր, ծանր, կին, այր, հայր, մեղր, մուկն:

4. Conjugate (կոնյարհեա) the following verbs:— 10

համ, ուտեմ, գնամ, տանիմ, ըմպեմ:

5. Parse (վերլուծեա) the following:— 10

Իօշկօք արդարութեան ամրացնալք՝ անկասկած են ի թիւնից խածանող օձին:

6. Correct the following:— 10

Լիատարեց Լստուած աւուրն վեցերորդ ամենայն գործք իւրոյ և յանգեաւ աւուրն եօթներորդ ամենայն գործից իւր:

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

80

Եւ որպէս եղև յաւուրսն Վոյի, նոյնպէս եղիցի և յաւուրս Որդւոյ մարգոյ: Ուտէին՝ ըմպէին՝ կանայս առնէին՝ և արանց լինէին՝ մինչև յօրն՝ յորում եմուտ Վոյ ի տապանն, և եկն ջրհեղեղն՝ և կորոյս զամենեսին:

Վոյնպէս՝ և որպէս յաւուրսն Վոլտայ եղև, ուտէին՝ ըմպէին՝ գնէին՝ վաճառէին՝ տնկէին՝ շինէին: Եւ յորում աւուր եւ Վոլտ ի Սողոմայ, տեղաց հուր և ծծումբ յերկնից՝ և կորոյս զամենեսին: Լստ նմին օրինակի եղիցի և յաւուրն, յորում Որդի մարգոյ յայանելոց է:

2. Give the meanings of the following words in English:— 10

Վիրաբոյժ, հականեխական, ջերմաչափ, մեղան, կարկին, վրձին, կենդանագիր, կենսագրութիւն, քերթողական, հանձար, տրամաբանութիւն:



8. Define in Modern Armenian the following grammatical terms:— 20

Լական բայ, ներգործական բայ, քրաւորական բայ, հայցական սեռի ինդիք, ստորագասական եղանակ, ստորագելի, յատկացուցիչ, գերբայ:

4. Translate into Modern Armenian:— 80

The ability to write good idiomatic English is an accomplishment of great value. It cannot be acquired by learning grammatical rules. Other means are equally needful. Ben Jonson says, 'For a man to write well, there are required three necessities: let him read the best authors, observe the best speakers, and have much exercise in his own style'. A few remarks may be made on the course to be pursued.

First, 'Read the best authors'. Children in good society learn to speak correctly listening to the conversation of those around them, many English ladies who have never studied grammar, write letters without a single mistake.

5. Construct short sentences to illustrate the use of the following words: 10

Ըզգակործան, անհրաժեշտ, անյապաղ, անխուսափելի, վաղվաղակի, մոայնութիւն, տրամագրութիւն, շահեկան, շահանդիք, ժլատ, մահճոգ, ոգևորութիւն:

## BENGALI (SECOND LANGUAGE)

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*The Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English one passage from each of the following groups:— 24

### GROUP A

(a) একদিন গৌরদাস বাবু মধুসূদনের সহিত সাক্ষাৎ করিতে বাইহা  
মেধেন যে, একটি মলিন শস্যার উপর শয়ন করিয়া, মধুসূদন রক্তবমন

করিতেছেন এবং তাঁহার পত্নী হেন্‌রিয়েটা, নিজের গৃহভলে পতিত হইয়া, হোগের স্বর্ণাশ্রয় আর্জনাৎ করিতেছেন। গোরদাস বাবু হেন্‌রিয়েটাকে মুচ্ছিত প্রায় দেখিয়া সাহায্যদানের জন্য অগ্রসর হইলেন। কিন্তু নিজের স্বর্ণাশ্রয় অপেক্ষা স্বামীর অবস্থাই তখন হেন্‌রিয়েটার পক্ষে অধিকতর ক্লেশকর হইয়াছিল; তিনি কাতর স্বরে বলিলেন, “আমার জন্য চিন্তা নাই; আমি মরিতে ভয় করি না; যদি পারেন, আমার স্বামীর প্রাণ রক্ষা করুন।”

(b) রাজা কহিলেন, “কেন মারিবে ভাই? রাজ্যের লোভে? তুমি কি মনে কর রাজ্য কেবল সোনার সিংহাসন, হীরার মুকুট ও রাজজ্ঞ? রাজ্য পাইতে চাও ত সহস্র লোকের স্বধ্বংসকে আপনার বলিয়া গ্রহণ কর,—এ যে করে সে-ই রাজা, সে পর্ণকুটীরেই থাক্ আর প্রাসাদেই থাক্। যে ব্যক্তি সকল লোককে আপনার বলিয়া মনে করিতে পারে, সকল লোক ত তাহারই! রাজাকে বধ করিয়া রাজত্ব মেলে না ভাই—পৃথিবীকে বশ করিয়া রাজা হইতে হয়।”

## GROUP B

(a) হয় হোক্ জন্মভূমি সৌন্দর্য্য-বিহীন,  
থাক্ তার চারি পাশে বিজন বিপিন,  
না থাক্ নিকটে নদ নদী সরোবর,  
না রোক্ সেখানে কোন খাঙ্গ পরিকর;  
তবু তার কাছে স্বরপুর কোন্ ছার,  
যেখানে জনম যার তাই ভাল তার!  
তিলেক রহিতে নারে প্রবাসী যেখানে,  
নির্বাসী সর্বদা রয় হরিষে সেখানে।

(b) আয় আয় আয়, আছ যে যথায়  
আয় তোরা সবে ছুটিয়া,  
ভাণ্ডার-দ্বার খুলেছে জননী—  
অন্ন-যেতেছে লুটিয়া!  
ওপার হইতে আয় খেয়া দিয়ে’  
ওপাড়া হইতে আয় মায়ে-ঝিয়ে,

কে কঁাদে ক্ষুধায় জননী শুধায়

আয় তোরা সব জুটিয়া !

ভাণ্ডার-দ্বার খুলেছে জননী—

অন্ন যেতেছে লুটিয়া !

2. Explain one passage from each of the following groups:—

16

• GROUP A

(a)

হৃদয়ে প্রকৃতি-সনে মানবের মন

বাধা আছে কি বন্ধনে বৃষ্টিতে না পারি,

নতুবা ষামিনী-দিবা প্রভেদ এমন,

কেন হেন উঠে মনে চিন্তার লহরী ?

কেন দিবসেতে ভুলি' থাকি সে সকলে

শমন করিয়া চুরি নিয়াছে যাহায় ?

কেন রজনীতে পুনঃ প্রাণ উঠে জলে',

প্রাণের দোসর ভাই, প্রিয়র ব্যথায় ?

কেন বা উৎসবে মাতি' থাকি কভু দিবারাতি

আবার নির্জনে কেন কাঁদি পুনরায় ?

(b)

তুমি চলে গেলে, হে মোর পূজারি,

ভাবিনি ত একদিন—

এমন করিয়া মোর মন্দির

হবে বন্দনা-হীন !

জানিতাম যদি, একবার গেলে

আসে নাকো আর ফিরে,

রাগিতাম তোরে, ভিখারী আমার,

সব সম্পদে ঘিরে ।

সব অভিলাষ মিটাইয়া, তোরে

মোর পাদপীঠতলে

চির-নিশিদিন বেঁধে রাখিতাম

চির-করণার বলে ।

## GROUP B

(a) অপরের প্রতি প্রেমের বিস্তার মাৎসর্ঘ্যের পরম ঔষধ। যে যাহাকে ভালবাসে সে কখনও তাহার শ্রী দেখিয়া কাতর হইতে পারে না। ভালবাসার পাত্রের শ্রীবৃদ্ধি দেখিলে আনন্দেরই বৃদ্ধি হয়, কখন প্রাণে মাৎসর্ঘ্য স্থান পাইতে পারে না। অতএব যাহার শ্রী দেখিলে কাতর হই, তাহার সদুণ প্রভৃতি আলোচনা করিয়া যদি কোন প্রকারে হৃদয়ে তাহার প্রতি ভালবাসার ভাব আনিতে পারি, তবে কখনও তাহার প্রতি মাৎসর্ঘ্যের দ্বারা ক্লিষ্ট হইব না। এইরূপে যতই ভালবাসা অপর লোকের উপর ছড়াইয়া পড়িবে ততই মাৎসর্ঘ্যের হ্রাস হইবে।

(b) যেখানে মাতার শীর্ণ দেহ স্নান মুখ দেখিয়া সন্তানের হৃদয়ে শোক উথলে না, অত্যাচার-প্রদীড়িত ভ্রাতার কাতর ক্রন্দনে হাই উঠিয়া থাকে, পরের মনস্তত্ত্ব সাধনের জন্ত সন্তানেরা পরস্পরের বিপক্ষে দাঁড়াইতে সম্মত হয়, সেখানে মঙ্গলের আশা কোথায়? মাতার দারিদ্র্য দেখিয়া যেখানে সন্তান আপনাকে ধনী মানী বিবেচনা করিতে পারে, যেখানে তুচ্ছ স্বার্থের জন্ত দুইবেলা মিথ্যা সম্মানিত হয়, সামান্য “পিঠ-খাবড়ানিতে” সমস্ত অপমান-জালা ঘুচিয়া যায়, সেখানে মঙ্গল আসিতে চায় না। জন্মভূমি জননীর সম্মানেই আমাদের সম্মান, জন্মভূমির শ্রীবৃদ্ধিতেই আমাদের শ্রীবৃদ্ধি।

3.

*Either,*

Give in your own words the substance of the story of বাস্কীকির জয়, indicating the lesson sought to be conveyed by it. 10

*Or,*

Give the gist of the conversation between Gāndhārī and Dhṛitarāshtra, regarding the conduct of Duryodhana. 10

4. (a) Distinguish between কর্ণধারয় সমাস and বহুব্রীহী সমাস, giving an example of each. 4

(b) Expound the *samāsas* in ANY FOUR of the following words :— 4

রাজপুরুষ, রাজহংস, তেলোভাজা, স্নগন্ধি, সিংহাসন, বোভাত, গোবেচারা।

5. (a) Form nouns from ANY THREE of the following adjectives :— 3

ধীর, মহৎ, ভয়, ইতর, বজ্রাত, দৃঢ়।

(b) Form adjectives from ANY THREE of the following nouns :— 3

জটা, নীতি, হিংসা, পাঠ, ধার, তেজ।

6. (a) Change the voices of the following sentences :—

3

(1) তিনি বিনয়-গুণে সকলের হৃদয় অধিকার করিয়াছিলেন।

(2) পাঠানেরা মোগলদের দ্বারা পরাজিত হইয়াছিল।

(b) Correct :—

8

যাহাদের মধ্যে ঐক্যতা নাই তাহারা ধংশ হয় শব্দেহ নাই।  
একপে কত জাতি বিনাস হইয়াছে তাহা শংখা করা দুস্কর। যখন বিদেশী  
শত্রুরা দেশ আক্রমণ করিয়াছিল তখন তাহারা পরস্পরের কণ্ঠস্থ লইয়া তিও  
বিবাদে উন্মত্ত হইয়াছিল। ফলে দেশের শর্ব্বনাশ হইয়াছিল।

7. Translate into Bengali either of the following passages :—

25

(a) Dick saw Madge feeding a cat with milk out of a platter. He looked at the cat, and longed to have it for his own. He had in his pocket a fourpenny-bit which a gentleman had given him for cleaning his shoes. So he went up to Madge and said, 'Please, will you sell me that cat? How much is it?' 'Why,' said Madge, 'My brother was going to drown it this morning, only I saved it; and now I wish I could find someone to take it and be good to it, for, to be sure, I don't know what to do with it myself. You may have the cat if you only give me that bunch of roses in your cap.'

(b) 'I do not like rain,' said Bela, as she watched the big drops falling on the trees and on the flowers in the garden. 'But do you know what rain is for?' said her sister. 'This shower will do good, as I am glad to see it.' 'Glad to see the rain?' asked Bela. 'I did not think that rain could make anyone glad. I never did like rain.' 'Do you like apples, and pears, and plums, and flowers?' asked her sister. 'Oh yes,' she replied; 'everybody likes them. But what have they to do with the rain?' 'The rain has something to do with them', said her sister. 'It makes the trees and the flowers grow.'

### (ADDITIONAL)

*The Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English either A or B :—

10

#### A

ঈশ্বরচন্দ্র ক্ষুদ্রাবয়বসম্পন্ন ছিলেন। বালক যখন পথে একাকী  
একটি ছাতা মাথায় দিয়া পড়িতে যাইতেন, তখন দূর হইতে দেখিয়া বোধ  
হইত, যেন পথে একটি ছাতাই যাইতেছে, ছাতার মধ্যে কেহ আছে বলিয়া  
বোধ হইত না। ঈশ্বরচন্দ্রের মাথাটি আবার এই ক্ষুদ্র দেহের সম্পূর্ণ  
অল্পপযোগী ছিল। সেই অন্য়তন দেহের পক্ষে মস্তকটি এইটি বৃহৎ ভার  
বলিয়া বোধ হইত। এজন্য বিদ্যালয়ের অন্যান্য বালকেরা ঈশ্বরচন্দ্রকে  
“বস্তুর কৈ” বলিয়া তামাসা করিত।

## B

আয় তোর ভাই-বোন, সবে মিলে বাই,  
 দুখিনীর আঁখিজল যতনে মুছাই ; •  
 আমাদের মাছুষের প্রাণ  
 একহ হবে নিরেট পাষণ ?  
 চল তোরা ওর হাত ধ'রে,  
 ডেকে' আনি আমাদের ঘরে ;  
 এ জগতে কেউ ওর আপনার নাই,  
 কেউ হ'ব বোন মোরা, কেউ হ'ব ভাই ;  
 তা হ'লে ও বেদনা ভুলিবে  
 তা হ'লে বা পুলকে হাসিবে ।

2.

Either, . •

Give a short account of the life of Bankimchandra, mentioning his works 10

Or, .

Relate briefly the story of শ্রীধর in simple prose, adding the moral it teaches. 10

3. Translate into English one of the following passages :— 30

(a) আলাদিন তাহার মাতাকে বলিল, “মা, আমার বড় ক্ষুধা পাইয়াছে, আমায় কিছু খাবার আনাইয়া দাও ।” তাহার মাতা বলিলেন, “বাছা, আজ ত' ঘরে কিছুই নাই ।” আলাদিন বলিল, “কেন মা, ঐ ত প্রদীপটি রহিয়াছে । ঐটি বিক্রয় করিয়া কিছু খাবার কিনিয়া আন ।” আলাদিনের মাতা তাহা শুনিয়া প্রদীপটি পরিষ্কার করিতে আরম্ভ করিলেন । অমনই এক প্রকাণ্ড দৈত্য আসিয়া তাহার সম্মুখে দাঁড়াইল । এবং বলিল, “ঐ প্রদীপ তাহার কাছে থাকে আমি তাহার দাস । আমাকে কি করিতে হইবে আদেশ করুন ।” তাহাকে দেখিয়া আলাদিনের মাতা ভয়ে মুচ্ছা গেলেন । কিন্তু আলাদিন প্রদীপটি হাতে লইয়া দৈত্যকে বলিল, “যাও, এখনই আমার এবং আমার মায়ের জন্য ভাল খাবার লইয়া আইস ।” দৈত্য তৎক্ষণাৎ খাবার আনিতে চলিয়া গেল ।

(b) এক দিন সিদ্ধার্থ বাগানে বসিয়া আছেন, এমন সময়ে একটি হাঁস আসিয়া তাহার কোলের উপর পড়িল । সিদ্ধার্থ দেখিলেন, হাঁসটির গায়ে

একটি বাণ বিঁধিয়া রহিয়াছে। তিনি তৎক্ষণাৎ বাণটি তুলিয়া ফেলিলেন এবং হাঁসের গায়ে হাত ব্লাইতে লাগিলেন। এমন সময়ে দেবদত্ত সেখানে আসিয়া বলিল, “আমীর হাঁস আমাকে দাও। এ হাঁস আমি মারিয়াছি, সুতরাং এ হাঁস আমার।” সিদ্ধার্থ উত্তর করিলেন, “ভাই, হাঁস কাহার? যে ইহাকে মারিয়াছে তাহার, না, যে ইহাকে বাঁচাইয়াছে তাহার? যাও, আমি হাঁস তোমাকে দিব না।” দেবদত্ত এই কথা শুনিয়া নিরাশ হইয়া ফিরিয়া গেল। এইরূপে হাঁসটির প্রাণরক্ষা হইল।

4. (a) Construct short sentences, using appropriate adjectives before the following nouns :— 6

মরুভূমি, বৃক্ষ, অন্ন।

(b) Expound the *samasas* in any three of the following words :— 3

গোধূক্ষ গিরিপথ, ফটিকজল, জিতেন্দ্রিয়, চরণকমল।

(c) Join in *sandhi* any four of the following, stating the rule in each case :— 4

জন + এক, বহু + আডম্বর, রাজ + ভ্রত, বয়ঃ + বৃদ্ধ, অহঃ + অহঃ, চতুঃ + কোণ।

5. (a) Form adjectives from any four of the following nouns :— 4

ক্রোধ বিষাদ, আনন্দ, শোক, চন্দ্র, স্বর্ঘ্য।

(b) Form nouns from any four of the following adjectives :— 4

মৃগ, নষ্ট, দুঃ, যক্ষ, দীর্ঘ, ছিন্ন।

(c) Give the feminine forms of any four of the following :— 4

সিংহ, গোপ, কোকিল, নাপিত, নায়ক, নেতা।

6. Translate either of the following passages into Bengali :— 25

(a) A stork once made a nest on the roof of a large house. One night the house caught fire! The poor bird had her baby birds in the nest, alas! they were too young to fly. She tried again and again to get them away, but could not. She could easily have flown away herself, but, no! she sat in the nest with her babies and preferred to die rather than leave her little ones. Was she not a dear, faithful little mother?

(b) Once there lived a holy saint whose name was Dharma. He often said his prayers in the middle of the night. Once he fell asleep while waiting for midnight. When he awoke, he was so ashamed of himself that he pulled out a sharp knife, cut off his eyelids, and threw them on the ground. From the ground upon which his eyelids fell there sprang up two beautiful plants! Pure white flowers grew upon the plants.

## BENGALI

(FOR FEMALE CANDIDATES)

*Paper-setters—* { SRIMATI BANGABALA MUKERJEE, B.A., B.T.  
MR. SYAMAPRASAD MOOKERJEE, M.A., B.L., BAR-AT-LAW

(COMPULSORY)

*Examiners—* { SRIMATI PUNYAPRABHA DASGUPTA, B.A.  
„ SANTA NAG, B.A.  
„ SNEHALATA RAYCHAUDHURI, M.A.

*Candidates are required to give answers in their own words as far as practicable. •*

*The figures in the margin indicate full marks.*

1. Translate one of the following passages into English :— 20

(a) ষাইবার পূর্বে তিনি জননীকে কহিলেন “মা আমি এ সম্মানে স্থখী হই নাই। তোমার যেরূপ বয়স হইয়াছে; আর আমার শরীরের যেরূপ অবস্থা, তাহাতে এক্ষণে গৃহে থাকিতে পারিলেই ভাল হইত। কিন্তু কি করি, কিছুতেই এড়াইতে পারিতেছি না। তুমি সন্তুষ্ট চিত্তে অহুমোদন করিলেই আমি কার্যস্থানে গমন করিতে পারি।” মেরী কহিলেন, “বাছা, ঈশ্বর তোমাকে যে পথে চালাইতেছেন, সেই পথে অগ্রসর হও; আমি কিছুতেই তোমাকে তাহা হইতে ফিরাইব না। আমি আর অধিক দিন বাঁচিব না সত্য, ইয়ত তুমি ফিরিয়া আসিয়া আমাকে আর ইহলোকে দেখিতে পাইবে না; কিন্তু যখন সকলে একবাক্যে তোমার সাহায্য প্রার্থনা করিতেছে, তখন নিজের স্থখের জন্ত তোমাকে গৃহে আবদ্ধ রাখিলে নিতান্ত স্বার্থপরতার কার্য্য করা হইবে। তুমি যাও, বিশ্বস্তভাবে কর্তব্য পালন কর; ঈশ্বর তোমাকে সিদ্ধকাম করিবেন।”

(b) আপনারা অনেকেই সক্র্তিসের কথা শুনিয়াছেন, তাঁহাকে কেহ কখনও রাগিতে দেখেন নাই। কয়েক জন বন্ধু চেষ্টা করিলেন, তাঁহাকে রাগাইতে পারেন কি না। তাঁহারা সন্ধান করিয়া জানিলেন, সক্র্তিস ভাল বিছানা না হইলে শুইতে পারেন না। চাকরকে ঘুস দিয়া তাঁহারা এক দিন বিছানাটা অপরিষ্কার করাইয়া রাখিয়া দিলেন; সক্র্তিস পরদিন চাকরকে জিজ্ঞাসা করিলেন, “বিছানাটা অপরিষ্কার ছিল, ভাল করিয়া রাখ নাই কেন?” চাকর বলিল, “কাজের তাড়ায় সে উহা করিয়া উঠিতে পারে নাই।” দ্বিতীয় দিনও বিছানার প্রতি কোনও যত্ন লওয়া হয় নাই, সক্র্তিস



আবার তাহার কারণ জিজ্ঞাসা করিলেন, চাকর যা হো'ক একটা কৈফিয়ৎ দিল। কিন্তু তৃতীয় দিন চাকরের অমুতাপ হইল, সে সক্রুতিসের পায় ধরিয়া কমা চাহিল এবং বলিল, তাঁহাকে রাগাইবার জন্য চেষ্টিত বন্ধুদের প্ররোচনায় সে ঐরূপ করিয়াছিল, কিন্তু রাগাইতে পারে নাই। সক্রুতিস বলিলেন, “তুমি আমার উপকার করিয়াছ, খারাপ বিছানায় শুইতে আমার অভ্যাস হইয়া গিয়াছে।”

2. Explain, with reference to the context, *any two* of the following :— 14

- (a) নিরস্ত্র বসিয়া কৃষ্ণ অর্জুনের রথে  
সাধিছেন স্থির চিত্তে ক্ষত্রিয় বিনাশ,  
নাশিছেন প্রিয়জন দেখ কত মতে,  
হাহাকার পূর্ণ করি আপন আবাস।  
যথা কৃষ্ণ তথা ধর্ম, সেইখানে জয়,—  
সতী গান্ধারীর কথা সত্য নিঃসংশয়।
- (b) ভানি আমি, ভীমবাহু ভীষ্ম পিতামহ ;  
দেব-নর-জ্ঞাস বীর্যে দ্রোণাচার্য্য গুরু।  
স্নেহপ্রবাহিণী কিন্তু এ দৌহার বহে  
পাণ্ডবসাগরে, কান্দ, কহিছ তোমারে।  
যদিও না হয় তাহা ; তবুও কেমনে,  
হায় রে, প্রবোধি, নাথ, এ গোড়া হৃদয়ে ?
- (c) কহ, মোরে, শুনি,  
মহারথি-প্রথা কি হে এই, মহারথি ?  
আনান্ন-মাঝারে আনি যুগেন্দ্র কৌশলে  
বধে ভীকৃতিত বাধ, সে যুগেন্দ্র যবে  
নাশে রিপু, আক্রমে সে নিজ পরাক্রমে।

3. Attempt *any one* of the following :—

16

- (a) State what you know of George Washington as President of the United States.
- (b) Give in your own words the story which Rabindranath Tagore concludes in the following way—

“মৃত্যুঞ্জয় সে পত্রখানি টুকরা টুকরা করিয়া ছিঁড়িয়া কূপের মধ্যে নিক্ষেপ করিল।”

(c) Briefly describe the advantages and disadvantages of the joint-family system.

(d) How did শনি persecute শ্রীবৎস, and why?

4. Combine the following sentences into a single one:— 5

প্রতাপের অখটি স্রোতস্বিনী লক্ষ দিয়া পার হইল। অখটি অসাধারণ বলিষ্ঠ ছিল। স্রোতস্বিনীটা সঙ্গীর্ণা ছিল। ইহাতে তাহার কোন আয়াস হইল না। প্রতাপের অনুসরণকারিগণ তাহা পারিল না। তাহাদের অখ তত বলিষ্ঠ ছিল না।

5. Correct all the errors in the following:— 6

অরণ্য অতিস্থিহাৱিত। বৃক্ষরাজীর সাধাপন্নবে উহার রম্য সন্ধান করিতেছে। তাতে আবার বস্তুকালোৎপন্নতার বর্ণ-বিচিত্র্যে কুণ্ঠমের দিবাগন্ধে সমস্ত বস্তুভূমিটি হ্রস্বী হইয়া যেন ইন্দের রম্যোচ্চানের সম্পদে স্থির নিরুপম্য বিস্তার করিতেছে।

6. (a) Form sentences with any four of the following groups of words so as to distinguish the differences of meanings:— 4

গোলক and গোলোক; পরশ্ব and পরশ্ব; শরাসন and সরাসন; অবগত and অপগত; অবিরাম and অভিরাম।

(b) Substitute single words for the following:— 5

যে আপনাকে পণ্ডিত মনে করে। সকল পদার্থ ভক্ষণ করে যে। যাহা উড়িয়া যাইতেছে। যে আপনাকে কৃতার্থ মনে করে। যিনি জ্যোতিষ শাস্ত্র জানেন।

(c) Form sentences with nouns derived from the following words:—

নিষগ্ন, মৃত, আশ্রিত, শাস্ত্র, চিত্র।

7. Translate one of the following extracts:— 25

(a) দেখিতে দেখিতে, অনেকটা বেলা হইয়া গেল। মার্ত্তণ্ডদেব প্রথর কিরণজাল জগতে বিস্তার করিয়া দিলেন ঘড়ী খুলিয়া দেখিলাম, বেলা আটটা বাজিয়া গিয়াছে। আসামী চাষাঝা ক্লেত্রে লাঙ্গল দিতেছে। আসামী বধূরা তাহাদের স্বামীর জন্ত গরম গরম চা প্রস্তুত করিয়া লইয়া মাঠের দিকে দ্রুতপদে চলিয়াছে। তাহাদের দ্রুতপদ সঞ্চালন দেখিয়াই মনে হইতে লাগিল, ইহাদের স্বামীর চা খাইবার সময় উত্তীর্ণ হইয়া গিয়াছে। মনে হইল। চা-ব্যবসায়ী তোমরা খজ্ঞ। নিভৃত পল্লীর নিরক্ষর চাষীদিগকেও চায়ের

নেশায় বেশ নিমগ্ন করিয়া রাখিয়াছ। যাহাদের দেশে দুইবেলা অন্ন জোটে না—বুটি ও রোজে হল চালনা করিয়া যাহাদের অঙ্গ কালীবর্ণ হইয়াছে তাহাদিগকেও চা কিম্বা খাইতে হইতেছে। খণ্ড চা-ব্যবসায়ী তোমাদের ব্যবসাই সার্থক।

(b) সারাদিন পরিশ্রমের পর মানুষ বিশ্রাম চায়। দেহের সমস্ত অঙ্গ-প্রত্যঙ্গ তখন ক্লান্ত, মন ক্লান্ত। তাই মানুষ ঘুমায়, তখন তাহার চেতনা থাকে না। সারাদিনের পর রাত্রে নিদ্রা হওয়া,—ইহাই স্বাভাবিক। ইহার ব্যতিক্রম ঘটিলে ব্যাধি জন্মায়। মানুষ ৩০।৩৫ দিন, এমন কি এখন দেখা যাইতেছে আরও অধিক দিন না খাইয়া বাঁচিয়া থাকিতে পারে, কিন্তু নিদ্রার অভাবে সে কয়েক দিনের বেশী কিছুতেই বাঁচিয়া থাকিতে পারে না। তবে অনাহার অপেক্ষা অনিদ্রাই শরীরের পক্ষে অধিক ক্ষতিকর। ক্ষুধার বেগ ধারণ করা তবু সহজ; প্রবল নিদ্রার বেগ ধারণ করা বড়ই কষ্টসাধ্য। কয়েক দিন ধরিয়া যদি কাহাকেও রোগীর সেবায় নিযুক্ত থাকিতে হয় কিংবা কোনও কারণে পর পর কয়েকদিন রাত্রি জাগরণ করিতে হয়, তাহা হইলেই তিনি নিদ্রার মহিমা বুঝিতে পারিবেন।

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either,* 10

State the sentiment sought to be conveyed in Rabindranath's কবুলিওয়াল।

*Or,*

Write a short note on the position of woman as wife, sister, and mother, in Bengal.

2. Translate into English any one of the following :— 10

(a) একদিন জর্জ কতিপয় বাল্য-সহচরের সহিত বাটার সম্মুখে মাঠে বেড়াইতেছিলেন, এমন সময়ে একটা আরব দেশীর অশ্ব তাঁহাদিগের সম্মুখে উপস্থিত হইল। ঐ অশ্বটা মেরীর গাড়ী টানিত; কিন্তু কাহাকেও পৃষ্ঠে আরোহণ করিতে দিত না। কেহ কেহ উহার চালচলন, অঙ্গপ্রত্যঙ্গ প্রভৃতির প্রশংসা

করিতেছেন দেখিয়া জর্জ হঠাৎ বলিয়া উঠিলেন, “এই ঘোড়াটার আমার চড়িতে ইচ্ছা হয়; যদি কেহ আমাকে উহার পিঠে উঠাইয়া দিতে পারে, তাহা হইলে একবার চেষ্টা করিয়া দেখি।” ইহা শুনিয়া সহচরগণ তাঁহাকে চড়িতে অহুরোধ করিলেন, কিন্তু তখনই জননীর কথা মনে পড়ায় জর্জের চিত্ত দোলায়মান হইল। তিনি কহিলেন, “ঘোড়াটার দ্রুত প্রকৃতির পরিচয় পাষ্টয়া মা সকলকে উহার উপর চড়িতে নিষেধ করিয়া দিয়াছেন। এক্ষণে আমি চড়িতে চেষ্টা করিলে তাঁহার কথার অগ্রথাচরণ হইবে।”

(b) পিতামাতাকে ছাড়িয়া অনেক যুবক স্বতন্ত্র হইয়া পড়ে, তাহাদের পিতামাতা ভাল কি মন্দ, তাহা আমি জানি না। কিন্তু শিশুর পক্ষে তাঁহারা সর্বাপেক্ষা ভাল হইয়া তাহাকে রক্ষা করিয়া বড় করিয়াছেন। সংসারে কোন সাধু, কোন শক্তিমান পুরুষ বা কোন মহৎ ব্যক্তি যাহা করেন নাই,—যাহা করিতে পারিতেন না, শিশুর জন্ত পিতামাতা তাহাই করিয়া থাকেন। শিশুর পক্ষে তাঁহাদের অপেক্ষা ভাল কে হইতে পারে? যদি বৃদ্ধ বয়সের দোষ আবিষ্কার করিয়া পুত্র তাঁহাদিগকে ছাড়িয়া যায়, তবে তাঁহাদের মনে কি ভাব হয়, তাহা কেমন করিয়া বুঝাইব? পিতামাতা তাহার নিকট কোন প্রত্যাশার চান না; যে পুত্র পিতামার প্রতি শ্রদ্ধাভক্তি দিতে ভুল না করে, সেইখান হইতে ভগবান্ স্বয়ং তাহার পূজা গ্রহণ করেন।

3. Translate into English any two of the following:—

15+15

(a) ডাক্তারের স্ত্রী লেখা-পড়ায় স্বপণ্ডিতা না হোলেও বুদ্ধি ছিল তাঁর খুরের মতো ধারালো—আব সে বুদ্ধিটা খেলতে বেশী সক্ষম সন্দেহই। সঞ্চয়ের জন্তে তিনি যে পন্থা আবিষ্কার করেছিলেন তা’ সম্পূর্ণই নতুন ও একেবারেই তাঁর নিজস্ব। তাঁহার ছোট ছোট সমান মাপের ছয়টি কাঠের বাক্স ছিল। এই ছয়টি বাক্স ছিল তাঁর পারিবারিক ব্যাঙ্কের ছয়টি ডিপার্টমেন্ট বা বিভাগ। বাক্সগুলির ডালায় পরিষ্কার বড় বড় হরফে লেখা ছয়টি টিকিট লাগানো ছিল, যথা—প্রথম—ডিসপেন্সারী; দ্বিতীয়—পোষাকপরিচ্ছদ; তৃতীয়—বাড়ী-নির্মাণ; চতুর্থ—ঋণশোধ; পঞ্চম—সঞ্চয়; ষষ্ঠ—খোকন। তাঁহার এমন কড়া নিয়ম যে তার এতটুকু ব্যতিক্রম হওয়ার ঘোটি ছিল না। যে দিন অদৃষ্টদোষে ডাক্তারের এক পয়সাও রোজগার না হতো, সে দিনও সঞ্চয়ের তহবিল থেকে তাঁহার হাত দিয়ে এক পয়সাও গলানো সম্ভব হতো না।

(b) পিতার আমিই একমাত্র সন্তান, অল্প বয়সেই আমার জননী পিতার ক্রোড়ে আমাকে শয়ন করাইয়া অমরধামে চলিয়া গিয়াছিলেন। মাতা ও পিতার উভয়ের ভালবাসাই পিতৃদেবের নিকট আমি পাইতাম। পিতা আমাকে যখন ত্যাগ করিয়া গেলেন, তখন সংসার আমার বিষবোধ হইতে লাগিল। মাসে তিন সহস্র টাক্ষা পিতার জমিদারী ও ঋষিদিগের আয় ছিল। আমার বাসভূমির উপর পিতার নামে এক অতিথিশালা খুলিয়া দিয়া আমার এক পিতৃ-বন্ধুর উপর অতিথিশালা পরিচালনের ভার অর্পণ করিয়া এক গভীর নিশীথে আমার স্বগ্রাম ত্যাগ করিয়া চলিয়া আসিলাম।

(c) মানুষ যে বিষয় চিন্তা করে—যাহা পাইবার জ্ঞতা তাহার দৃঢ় আকাঙ্ক্ষা হয়, এক দিন পরে হউক, দশ দিন পরে হউক, তাহা সে প্রাপ্ত হইবেই হইবে; ইহা গুরুর মুখে শুনিয়াছিলাম। ইহাজীবনেও যদি আকাঙ্ক্ষা পূর্ণ না হয়, তবে পরজীবনেও তাহা পূর্ণ হইবে। আজ এই সন্ন্যাসীর দর্শন পাইয়া গুরুবাক্যের স্বার্থতা স্মরণের সহিত অনুভব করিলাম। সন্ন্যাসীর ক্রোড়ে যন্তক রাখিয়া কাদিতে লাগিলাম। সে ক্রন্দনে যে কি সুখ, কি আনন্দ, কি শান্তি, তাহা ভাষায় বুঝাইবার নয়। আমি কতদিন এই সন্ন্যাসীকে দেখিবার জ্ঞতা কাদিয়াছি। তীর্থে ভ্রমণ করিয়া সন্ন্যাসী দেখিলেই, তাঁহাদিগকে ইহার সংবাদ জিজ্ঞাসা করিয়াছি, কিন্তু কেহই তাঁহার কোন সংবাদ দিতে পারে নাই।

4. (a) Frame sentences with nouns derived from *any four* of the following :— 6

বিষয়, মৃত, আশ্রিত, শাস্ত, ছিন্ন।

(b) Construct sentences to illustrate the idiomatic use of *any four* of the following :— 6

শোণায় শোহাগা, কড়ায়গণ্ডায়, অরণো রোদন, গলগ্রহ, বালির বীধ, হাতে কলমে।

(c) Correct the errors in the following :— 5

স্বরস্বতীর বরপুত্র মহাত্মা বিদ্যাসাগরের রিদ্দয় দয়ার প্রত্নবন সরূপ ছিল। তাহার আয়ের অধিকাংশ বিপদ ও ব্যোধিগ্রন্থদিগের সাহায্যে ব্যায়িত হইত। স্বার্থপর মানব কেবলমাত্র আপনাকে লইয়া ব্যস্ত থাকে।

5. Change the following according to the directions given (without altering the sense of the original sentences):— 8

(a) ভগবানের নিকট তোমার মঙ্গল কামনা করি—Turn into optative.

(b) সত্যকথা বলিলে সকলের প্রশংসা করা যায়—Use a nominative for সত্যকথা বলিলে।

(c) বিপদে ধৈর্য্য অবলম্বন করা উচিত—Turn into Negative.

(d) তাহার কথায় বিশ্বাস স্থাপন করা যাইতে পারে—Use one word for the portion underlined, changing the preceding word if necessary.

6. Translate into Bengali any two of the following :— 25

(a) Food should only be eaten when one is hungry. Natural hunger is the true guide to the food to be eaten. To obtain a true natural hunger, meals should only be taken at intervals of five to six hours, and nothing should be eaten between meals. The stomach must have rest for eating between meals exhausts the power of the digestive organs, and has other harmful effects. Food should not be taken when tired, angry, excited, distressed, or worried.

(b) The coconut is both food and drink. People eat the pulp and drink the milky juice inside the nut as freely as milk. Sometimes people let the juice ferment, and then it turns into palm wine and vinegar. Coconut oil is made from nuts which are too old to be eaten. The old nuts are broken up and dried in the sun, and the oil is pressed from the broken fragments. The oil is sometimes used for cooking.

(c) Florence became more and more restless as the years went on. Every time she spoke her desire her parents would suggest something else or would take her on a long trip abroad, or plan something for her to do. At last she left her home and went abroad and worked and studied, night and day, to make herself a nurse. She was so interested in her work that she became a most capable nurse. Then she returned to England and taught other nurses in the hospitals there.

## ASSAMESE (ALTERNATIVE SECOND LANGUAGE)

(FOR FEMALE CANDIDATES)

Paper-setters— { Mr. BANIKANTA KAKATI, M.A.  
Srimati SUKHALATA DAS, M.A., B.T.

### COMPULSORY PAPER

Examiner—MR. ATAUR RAHAMAN, M.A.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate any two of the following passages into English :— 20

(a) মিঠাৰ গেইটে চিৰকালৰ নিমিত্তে আসাম এৰি যোৱাত এইদেশৰ  
কি অনিষ্ট হ'ল তাক কৈ শেষ কৰিব নোৱাৰি। তেওঁয়েই প্ৰথমতে এই দেশৰ

সম্বন্ধে বীতিমতে ঐতিহাসিক অনুসন্ধানৰ কাম আৰম্ভ কৰে আৰু তেওঁৰ যত্নতে “হেমকোষ” প্ৰকাশিত হয়। তেওঁ অনেক গুৰুত্বৰ কামত আবদ্ধ থাকিও আসামৰ এখন ডাঙৰ বুৰঞ্জী লিখে।

(b) অসমীয়াসকল, তোমালোকৰ ভিতৰত বাণিজ্যৰ অনুশীলন নিচেই নাই; সকলোৰে ধন মাটিত পুতি থবলৈ ভাল পায়। কিন্তু কিহৰ পৰা কি হয় তাক কেৱে নিচিন্তে। ইংৰাজৰ সভ্যতাৰ ঘাইবল এক বাণিজ্য। এতেকে যদি ধনবস্তু সভা হব খোজা তেন্তে সম্প্ৰতি বাণিজ্যত প্ৰবৃত্ত হোৱা।

(c) উত্তৰ লক্ষ্মীপুৰ মহকুমাৰ চকুলি-ভৰীয়া গাওঁও ভকতৰাম নামে এটা ডেকা আছিল। গাওঁখনত ভকতৰাম এজন ধনী মানুহ। তেওঁৰ পিতাকে চাহ বাগিছাত চাকৰি কৰি হাজাৰ চেকেক টকা আৰ্জি থৈগৈছিল। তাৰ বলতে গাওঁৰ ভিতৰত ভকতৰাম হঠাৎ এজন ভালমানুহহৈ জিলিকিছিল।

2. Either, Give briefly in your own words the story of Anandaram Phookan's life and summarize his message to the Assamese people. 12

Or, Narrate the anecdote as given in your text book about Aristides, the Just.

3. Write the substance of the essay on either 'Self-control' (আত্মসংযম) or 'Health and Rest' (স্বাস্থ্য-জিৰণি) as given in your text. 15

4. Explain with reference to the context any THREE of the following passages :- 18

(a) তুমি মোৰ কৰবাৰ প্ৰাণ-শীতলোৱা  
গোধূলিৰ শান্তিৰ জৰণ!—  
কেনি বোৱা, কেনি যোৱা, কোন পিনলই,  
ক'ৰ পৰা ওলালা নজনা।

(b) দেখা নাই, শুনা নাই, তুমি এটা মোৰ  
হৃদয়ৰ নজনা বাসনা  
মনেৰে ধুনীয়া কৰা, মনেৰেই সজা,  
তুমি মোৰ পৱিত্ৰ কল্পনা।

(c) পৱিত্ৰ অন্তৰ যাৰ দাপোণৰ দৰে,  
স্বৰগৰ প্ৰতিবিম্ব তাতে আহি পৰে।

(d) আজৰিৰ অৱস্থা হুবিধ, এবিধে মামৰ ধৰাই জীৱন ক্ষয়কৰে  
আনবিধে আনন্দজনক সাৰশক্তি দি জীৱনী শক্তি সৰল কৰে।

5. Answer any FOUR of the following questions :—

20

(a) Join any FIVE of the following *sandhis* :—

বয়ঃ+অধিক, দিব্+লোক, জগৎ+জীবন, পিতৃ+আলয়, নিঃ+বস,  
অহু+এষণ, মহা+উষ্মি, বিপদ+হেতু, পুনঃ+জন্ম ।

(b) Give the opposite genders of any FIVE of the following :—

বন্ধা, বিদ্বান্, বৃঢ়ামুহ, আপোনপেটী, টেলেকা, কলা, বন্দী, শাহ ।

(c) How many tenses are there in Assamese ? Illustrate each of them.

(d) Name all the *upasargas* used in the Assamese language.

(e) Explain and illustrate the difference between বহুব্রীহি সমাস and কর্মধারয় সমাস ।

6. Translate ONE of the following passages into English :—

15

(a) কষ্টক কষ্ট ছুৰুলি ৰাতিয়ে, দিনে মিছ্ নাইটিঙেল আক তেঁওৰ সঙ্গিনীসকলে এই মৃতপ্ৰায় সৈনিকবিলাকক শুশ্ৰূষা কৰিবলৈ ধৰিলে । তেওঁ নিজহাতে ৰান্ধি সিহঁতক আহাৰ খুৱাইছিল । ঘিবিলাকে ৰোগযজ্ঞগাত পৰি মৃত্যু কামনা কৰিছিল, তেওঁলোকক তেওঁ সান্ত্বনা দিছিল । বহুতৰ হৈ সিহঁতৰ আত্মীয় স্বজনলৈ চিঠি পত্ৰও দিছিল । তেঁওক শয্যাৰ কাষত দেখিলে সিহঁতে ৰোগযজ্ঞগা তুৰন্তে পাহৰিছিল । ৰোগীৰ অন্তৰ্কবিবৰ হ'লে সিহঁতে ডাক্তৰ আৰু আন শুশ্ৰূষাকাৰিণীৰ কথা বৰ নেমানিছিল, কিন্তু মিছ্ নাইটিঙেল কাষত থিয় হ'লে সিহঁতে বিনা ওজৰে গা-পাতি দিছিল ।

(b) তাৰপাচত ককাইদেৱেকৰ লগত ভাৰতৰ নানান্ তীৰ্থ নানাঠাইত বমাবায়ৈ ফুৰিবলৈ ধৰিলে । ভাৰতৰ তিকতাৰ পক্ষে সংস্কৃত আৰু নিজ মাতৃভাষা শিকা যে একেবাৰে কৰ্ত্তব্য তাকে ককায়েক ভনীয়েকে দেশে দেশে প্ৰচাৰকৰিলে । তেতিয়া তেঁওলোকৰ অৱস্থা বৰ বেয়া আছিল, এনেকি পিছা সাজপাৰো ভাল নাছিল, ভালকৈ অন্নবো সংস্থান নহৈছিল । নানা ঠাইত বক্তৃতা দি দি অৱশেষত তেওঁলোক কলিকতালৈ আহে, তাতো স্ত্ৰীশিক্ষাৰ আৱশ্যকতা বিষয়ে বক্তৃতা দিয়ে ।



## ASSAMESE ( SECOND LANGUAGE )

*Paper-setters*— { MR. AMBIKANATH BORAH, M.A.  
SRIMATI SUKHALATA DAS, M.A., B.T.  
COMPULSORY PAPER

*Examiner*—MR. BANIKANTA KAKATI, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Either, Describe the battle of Hadira as you find it written of in *Monomati*. 16

Or, Explain why the British Government had to fight the Burmese and how the British Government was established in Assam.

2. Describe either the marriage of Sreekrishna in Daraka or his journey from Daraka to Kundin. 16

3. Reproduce in your own words the description of মৰিশালী as you find it in জ্ঞানমালিনী. 16

4. Explain the following\*with reference to the context :— 10×3

(a) দাকৈকে ডাকুন্ত বথ চলে সাতো আগ ।  
সেহি বেলা সেনা গণে খেদি পাইলা লাগ ॥  
বহ বহ বুলি সবে তেজিলা আটান ।  
আসি আমি পাইলো লাগ কৈক লাগি যাস ॥

(b) পৰিথকা লাও গোলা জঁকা কামিহাড়,  
ছিগাহাত ছিগা ভৰি দেখি আপোনাৰ,  
জীৱন্তৰ যত কথা মনে মনে গুণি,  
অতি বেজাবেবে কান্দে হিয়া ধুনি ধুনি ।

(c) মানহঁত দুৱাৰমুখৰ ওচৰ পাওঁ পাওঁ হওঁতেই কৰ্মকুশলা পমীলাই  
চেগবুজি টিলিৰি মাৰি বৰটোপত জুই দিলে ।

5. Decline the pronoun মই in all cases in both the numbers and give the noun forms of খোৱা, পঢ়া, গা, and the adjective forms of পেট, পায়, মূৰ, পানী। 12

6. Write the substance of the following :— 10

মাহুহ আৰু পশুবিলাকৰ ভিতৰত এটা বৰ ডাঙৰ প্ৰভেদ এই যে, মাহুহ উন্নতিশীল জীৱ, কিন্তু পশুবোৰ তেনে নহয়। এই প্ৰভেদৰ বাবেই মাহুহ যিমান অসভ্য হওক, পশুবিলাকতকৈ বহুতগুণে শ্ৰেষ্ঠ। চৰায়ে তাৰ বাহ সাজে, বিবৰে তাৰ গড়াল সাজে, ঘোঁ-ববলে সিহঁতৰ চাক বান্ধে; চৰাইৰ

বাহ, বিববৰ গড়াল মৌ-ববলৰ চাক আদিৰে পৰা একে নিয়মে সজা হৈ আহিছে। এহেজাৰ বছৰ আগেয়ে কাউৰীয়ে যেনেকৈ বাহ সাজিছিল, এতিয়াও সেইদৰেই সাজিছে; কিন্তু এশ বছৰ আগেয়ে মাহুহে যেনেকৈ ঘৰ সাজিছিল এতিয়া তেনেকৈ নেসাজে। ইয়াৰ দ্বাৰাই বুজা যায়, মানব জাতি উন্নতিশীল কিন্তু পশুবিলাকৰ উন্নতি নাই।

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Give the substance of the conversation between হলকান্ত বৰুৱা and জটীয়া বাৰাজি. 12
2. Write in your own words the story of Rukminiharan. 12
3. Explain any TWO of the following:— 14

(a) পাসৰিলি হৈবে বলভদ্র মোক কথা।

তুমো ভাষেৰে যেনে কৰিলোঁ অৱস্থা ॥

একবাৰ থেদিলোঁ দেখিলেঁ সামৰাজে।

দুইভাই গামচা দিলি সমুদ্ৰৰ মাজে ॥

(b) এইয়ে জীৱনফুল পহুমৰ দৰে,  
দেহা পুখুৰীত থাকে উল্‌বল্‌ কৰে,  
কাল পচোৱাষে আহি কৰে থান থান,  
ডেকাইতে সি কথাত দিছে আওকাণ।

(c) এই কথা মনে মনে জানিবি থিৰাং  
প্ৰভুদিহা বিলাকৰ নাই টাং বাং  
যেবে স্থখ দুখ আছে, আছে ৰাতিদিন,  
উপজিলে মৰিবও লাগিব এদিন।

4. Frame sentences to illustrate the use of the following phrases:— 10

হাতলৰ, চকুচৰহা পেট টেঙৰ, দীঘল সজীয়া, জপা পুৰণি, গুণাকটা,  
নেজালতৰা, চোতালনাকী, পাবতগজা, পদূলীওড়া।

5. Write in what sense the তৰ্কিত particles অনি and ইয়া, and the কৃৎ particles অন and ওতা are used. Give an example of each of them to illustrate their use. 12



सम्पादक और मालिक राजासाहब अयेजी पोशाक पहनते हैं, अयेजी ढंग पर रहते हैं और अयेजी ही ढंग से भोजन करते हैं। मांस आदि के बड़े तरफदार हैं, यहाँ तक कि कुत्ते भी शोमान की अयेजी ही पसन्द हैं।

(b) एक समय राजा भोज कालिदास की साथ ले वनक्रीड़ा के हेतु अरण्य की गये, और घूमते घूमते थके माँदे हो, एक नदी के किनारे जा बैठे। इस नदी में पत्थर बहुत थे, उन पर पानी गिरने से बड़ा शब्द होता था। उस समय राजा ने कालिदास से विनोद करके पूछा कि कविराज, यह नदी क्यों रातो है? कालिदास ने उत्तर दिया कि—महाराज, यह छीटे ही पन में अपने मैके से समुद्राल की जाती है।

(c) साँईं एकै गिरि धरे गिरि धर गिरि धर होय।

इनूमान बहु गिरि धरे गिरि धर कछै न कीय ॥

गिरि धर कछै न कीयं इनू धवला गिरि लायो।

ताकाँ किनका टूटि पखी सी कृष्ण उठायो ॥

कह गिरिधर कविराय बड़ै न की बड़ी बड़ाई।

धोरे हो जस होय जसौ पुरुषन काँ साँईं ॥

(d) कनक कोट विचित्र मनिक्कत सुन्दराजित अति घना।

चौहट्ट हाट सुवाट बीधी आर पुर बहुविधि बना ॥

गज बाजि खखर निकर पदचर रथ बरुधन की गनै।

बहु रूप निशिचर जूथ अति बल सेन बरनत नहि बनै ॥

(e) दुख में सुमिरन सब करै, सुख में करै न काय।

जो सुख में सुमिरन करै तो दुख काहँ की होय ॥

काल करै सी आज कर आज करै सी अब्ब।

पल में परलय होयगौ, बहुरि करैगो कब ॥

रहिमन अती न कीजिये, गहि रहिए निज कानि।

सहिजन अति फूलै तऊ अर पात की हानि ॥

2. (a) Parse the underlined words in Question 1.

6

(b) Give the Tatsama (Sanskritic) forms of FIVE of the following words:—

5

बरनन, हिय, जाँघ, पाहन, लाज, परलय, सुमिरन।

(c) Explain the meanings and make use of any FOUR of the following expressions in sentences of your own:—

80

छोड़ करना ; सुख सीना ; लोहा लेना ; दाँत काढ़ना ; गले पड़ना ; आख भूंदना।

3. Describe shortly in Hindī the life and character of Mirābāī as depicted in your text-book. 10

4. (a) Illustrate the rule about the correct use of the following post-positions :— 3

- (i) को in dative.
- (ii) से in instrumental and ablative.
- (iii) के in genitive.
- (iv) पर in locative.

(b) Name and differentiate between the various kinds of past tense in Hindī. Illustrate them in simple sentences. 10

(c) Correct the following sentences, giving reasons for your corrections :— 10

- (i) हम कहें थे तू घर जाओ ।
- (ii) राम का किताबों में सियाही गिर गिया है ।
- (iii) आकाश में चन्द्रमा अच्छी लगती है ।
- (iv) वो अपना बेटा का सदी देस में किया रहा ।
- (v) हमारे से धूप में चलना नहीं बनता ।

5. Translate the following into idiomatic Hindī :—

25

Our body requires to be bathed as soon as any dirt settles on it ; our clothing requires changing as soon as it becomes soiled ; in a similar manner our dwelling-houses require to be thoroughly cleaned, and their walls white-washed, at least once every year to remove the dirt that may have settled through the effects of the weather or formed through the action of decay. House-cleaning and whitewashing remove all obnoxious germs with which premises might be polluted, and thereby not only foster cleanliness but also promote the health of its inmates.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English agreeably to the context :—

- (a) तू अपने बल पर ऐ मूर्ख, इस जान अबस हंकार लिया । 6  
वह तुझको मार गिरावेगा, यों जैसे भुग्रा मार लिया ॥

Write sentences to illustrate the different meanings of the word जान . 4

- (b) इस समय इसकी वैसी ही दशा ही रही है जैसी कि दुश्मन के त्यागने पर शकुन लः

की हुई थी ।

4

Explain the allusions contained in the above.

6

2. Translate *three* of the following passages into English :— 30

(a) शिक्षा की पूर्णता के लिये अंग्रेजी ही नहीं, जर्मन, फ्राँस आदि भाषा-समूहों का ज्ञान प्राप्त करना भी आवश्यक है ; किन्तु इसका यह मतलब नहीं कि बिना अंग्रेजी के किसी की शिक्षा पूरी ही नहीं हो सकती । यह सीखना कि सब की अंग्रेजी जानना ही चाहिये—सर्वथा असम्भव है । एक जिले में सिर्फ एक ही अंग्रेज जज या मजिस्ट्रेट है ; बस इस लिये अदालत को सब कार्रवाई अंग्रेजी में सम्पन्न होनी चाहिये यह भी गैरमुनासिब है ।

(b) हाथ्य मस्तिष्क-शक्ति की ठीक करने का अधूर्व वैज्ञानिक साधन है । इसका स्वास्थ्य पर बड़ा अच्छा प्रभाव पड़ता है । शारीरिक और मानसिक सभी शक्तियाँ इससे ताज़ी हो जाती हैं । शाम को अपने मित्रों के साथ बैठकर या घूमते-फिरते तरह-तरह की बातें कीजिये और हँसिये । दो चार दिनों में ही आपकी अपने कार्य में अद्भुत परिवर्तन नज़र आयगा ।

(c) भीर का वक्त था । मैं एक टमटम भर बैठ कर दीघाघाट से पटना जा रहा था । रात रेलगाड़ी में कटी थी—भपकियों में ही । ऊँघता हुआ ही टमटम पर बैठा था । टमटम की गति के कारण, भीर की हवा, सन्न-सन्न करती, देह से टकराती; पीछे भागती जाती थी ।

(d) अपना घर भी क्या बसु है ? अंग्रेजों को देखा है कि वे हजारों मील दूर जाकर धनोपार्जन करते हैं, सब भौति से उनकी सुपास होता है । इतना आराम भारतवासियों की स्वप्न में भी नहीं मिलता, परन्तु फिर भी उनका अपने घर का प्रेम नहीं कूटता ।

3. (a) Explain the meanings of the underlined words in the following sentences :— 8

- (1) राजा को शासन करना पड़ता है ।
- (2) घोड़ा कितने की टोरी ?
- (3) राम ने श्याम से यह बात पूछी थी ।
- (4) मैं चाहता हूँ कि कीड़े मुझ से अच्छा न हो ।
- (5) दिन की रात हो गयी ।
- (6) वह दुःख का सताया है ।
- (7) राम देखने में सुन्दर है ।
- (8) तुम कितने दिनों में बाहिर पहुँचे ?

(b) Use the masculine genders of the following words in sentences of your own :— 5

बहन, सास, बोल, स्त्री, दाई ।



पाठ हुआ। यह बालक प्रखर धूप और मेघाच्छन्न रात्रि में जंगलों में फिरता था। शस्त्रों की भङ्गकार ह्री इसकी लिये मधुर मातृगीत की लीरी थी। लक्ष्मी के स्थान में भगवती रणचंडी ही इसकी धात्री थी।

(b) झूठा विश्वास ही हमलों की कायर और निरुद्यमी बना देता है। जो जाति एक-मात्र परब्रह्म सत्य श्री अकाल पुरुष की उपासना के सिवा व्यर्थ पचड़ों में समय नहीं गँवाती उसका बल मिथ्या विश्वासियों से अवश्य प्रबलतर होता है। अनु, अब हिंदू जाति की जगाना चाहिये। व्यर्थ के आडम्बरों से कुड़ाकर उन्हें सच्चे धर्म-मार्ग पर लाना चाहिये। तभी इनकी जड़ता दूर होगी।

(c) तजि मद मोह कपट कल नांना ।  
करउँ सद्य तेहि साधु समाना ॥  
जननी जनक बंधु सुप्त दारा ।  
तनु धन भवन सुहृद परिवारा॥  
सब कह समताताग बटीरी ।  
मम पद मनहि बैध बरि डोरी ॥  
समदरसी इच्छा कछु नाहीं ।  
हरष सीक भय नहिं मन माहीं ॥  
अस सज्जन मम उर बस कैसे ।  
लोभो हृदय बसइ धन जैसे ॥

(d) कहँ लौं कहिये ब्रज की बात ।  
सुनहु स्याम तुम बिन सन लोगन जैसे दिवस बिहात ॥  
गोपी ग्वाल गाय गोसुत वै मलिन बदन कस गात ।  
परम दीन अनु सिसिर हिमावत अबुजगन बिनु पात ॥  
जो कीउ आवत देखि दूरतें सब पूकति कुसलात ।  
चलन न दैत प्रेम आतुर उर कर चरनन लपटात ॥

2. Describe and comment on in your own Hindi the social and political condition of India during the time of Sri Krishna. 12

3. What are the eight directions given by the Buddha for avoiding the miseries of life? What according to him is Nirvāna? 9

4. Parse the words underlined in Question 1. 5

5. (a) Form nouns from adjectives, and adjectives from nouns, and use them in sentences of your own :— 10

बुद्धि, युवा, अनुग्रह, बडा, उपस्थित ।



(b) Fill up the blanks in the following:—

8

रात ——— जाना अच्छा नहीं। गुरु ——— पढ़ाना उचित है। उसने राम ——— कहा।  
 मैं अपयश ——— डरता हूँ। दिन ——— रात हो गई। जिस ——— आँख न हो वह क्या  
 जाने।

(c) Re-write the following correctly:—

12

मीरा की यह भक्तिभाव की देखकर कुमार भोजराज पहली तो कुछ नाराज हुए परन्तु धन  
 में मीरा का हृदय की यह भक्ति से उसकी बड़ी प्रसन्नता हुई। वह मीरा के लिये एक चलग  
 गोविन्दजी का मन्दिर बनवा दिये। जहाँ वह मीरा की देखते तभी उसका मन मीरा के ओर  
 खिंच जाता।

6. Translate the following passages into English:—

25

(a) रबिया की माँ तो उसके बचपन में ही मर गई थी। पिता भी रबिया की बारह  
 वर्ष की उम्र में ही बनायिनौ कर चला बसा। रबिया बड़े ही कष्ट के साथ अपना जीवन-  
 निर्वाह करती। एक समय देश में भयानक भूकाल पड़ा, जिससे बहनों का संग भी छूट  
 गया। किसी दुष्ट ने रबिया की फुसलाकर एक धनी के हाथ बेच दिया। धनी बड़ा ही  
 स्वार्थी और निर्दय स्वभाव का मनुष्य था। पैसों से खरीदी हुई गुलाम रबिया पर तरह-तरह  
 के जुल्म होने लगे। गाली और मार तो मचमूली बात थी। विषय-मद में मतवाली लोगों  
 के लिये ऐसा आचरण स्वाभाविक ही है। रबिया कष्ट से पीड़ित होकर अकेले में ईश्वर के  
 सामने चुपचाप अपना दुखड़ा सुनाया करती।

(b) जब मैं लंदन में रहता था, उस समय जो भारतीय विद्यार्थी मेरे घर पर आया  
 करते थे उनमें एक दक्षिण-भारतीय ब्राह्मण नवयुवक भी थे। उनका जन्म मैसूर-राज्य की  
 राजधानी के पास हुआ था। उनकी जन्मभूमि के निकट ही एक मन्दिर स्थित है, जो अत्यन्त  
 पवित्र समझा जाता है। सैकड़ों मील के यात्रो इस स्थान पर देव-दर्शन के लिये आते हैं।  
 यात्रियों से प्राप्त धन और उदार महाराज के दान से वहाँ के धार्मिक प्रवृत्ति रखनेवाले शिक्षित  
 ब्राह्मण निधन होकर अपनी बौद्धिक और आध्यात्मिक उन्नति करते हैं और उन्हें अर्थविन्ना  
 नहीं व्यापती।

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

NOTE.—10 marks are reserved for neatness and good expression.

1. Translate any two of the following into English, choosing one from each group:—

16

## GROUP A.

- (a) नव तरु किसलय मनङ्ग क्लसान् ।  
 काल-निसा-सम निसि ससि भान् ॥  
 कुवलय विपिन कुल-वन-सरिसा ।  
 बारिद तपत तेल जनु बरिसा ॥  
 जे हित रहे करत तेह पीरा ।  
 उरग स्वास सम विविध समीरा ॥  
 कहैत ते कछु दुख घाटि न कीई ।  
 काहि कहैत यह जान न कीई ॥  
 तल प्रेम कर मन भर तोरा ।  
 जानत प्रिया एक मन मोगा ॥  
 सो मन रहत सदा तोहि पाहीं ।  
 जानु प्रीति रस एतनेहि माहीं ॥

- (b) मीथ्या, मोहि दाऊ बहुत खिन्नायो ।  
 मोसों कहत मोल की लीनी, तू असमति कब आयो ॥  
 कहा कहौ यहि रिस के मारे, खेलन हौ नहि जातु ।  
 पुनि पुनि कहत कौन है माता, को है तुम्हरी तात ॥  
 गोरे नन्द जसोदा गोरी, तुम कत स्याम सरीर ।  
 चुटुकी दै दै हंसत म्वाल सब, सिखे दैत बलबीर ॥  
 तू मोही की मारन सीखी, दाउहिं कबहुंन खोभै ।  
 मोहन की मुख रिस समेत लखि, असमति सुनि सुनि रीभै ॥

## GROUP B.

- (c) शाहजादा मुबिन्ना ने देखा कि सामन्त साधारण नहीं है । असलु वह बड़े जीर  
 रशी से चढ़ाई करने की तैयारी करने लगा । इसी बीच में गुल-घर का एक पुराना सेवक

और भक्त हाथ जोड़ शाहजादे के सामने आया और बोला कि “हुजूर ! गोविन्द सिंह एक खुदापरस्त साधारण फकीर है, उसपर बादशाही ताकत की आजमाइश करना ठीक नहीं। यदि आप जीत गए तो बल्कल लंगीटी लगाकर जंगलों में चला जायगा और वहीं भजन करेगा। मगर खुदा न करे कहीं हुजूर की हार हुई तो बादशाही ताकत की सूरत बदनामी होगी। इस लिए मुनासिब यही है कि उससे छिड़काव न हुआ जाय।”

(d) जिस समय बालसूर्य की लाल किरणें पहाड़ों की बरफीली चोटियों पर पड़कर उनको रंगत सुनहली करने लगी उसी समय नदी के उस पार टेढ़े-मेढ़े पहाड़ी मार्ग से एक सवार आता हुआ दिखलाई दिया। सब से पहले अश्विकुंड के पास बैठे हुए एक सवार ने उसे देखा था। उसने सेनापति के पास आकर उन्हें वह आता हुआ सवार दिखलाया। जब वह सवार पास आया तब दोनों ने देखा कि वह भंड का चमड़ा ओढ़े हुए और एक काली घोड़े पर सवार है और शीघ्रतापूर्वक नदी की ओर चारहा है।

2. (a) State the grammatical position of *any five* of the underlined expressions in the Question 1. 5

(b) Explain and illustrate *any six* of the following idioms :— 9

भोकाभोक— दांत खट्टे करना— बीडा उठाना— आखें मूढ़ना— मुड़ मोड़ना— घुटने टेंकना— हाथिल्ला करना— हाथ पसारना— नाक रगड़ना— गिड़गिड़ भपकी दिखाना।

3. (a) Describe in your own words (in Hindi) either the battle of ‘Hunas’ or ‘of the Sikhas (सिख) against the Moghal Army’. 8

(b) Sketch the character of Akbar, Samudra Gupta, and Gurugovind Singh. 12

4. How do you differentiate between the usages of ‘की’ in कर्म-कारक and सम्प्रदान-कारक, and ‘से’ in करण-कारक and आपादान-कारक ? 10

5. Rewrite the following correctly, giving reasons for your corrections :— 10

हमने बोलना मागा तीसरा घोरा तेज नेई दौरने सेकता। बी बोलता घोरा दौरने सेकेगा कसन जाब उसमे दाना पानी नेई पोचाने मागोगा। हम घोरा पीट ऊपर में चेष गिया मगर भूख से घोरा व्याकुल सेलना नेई मागता। हमको फिन उतरने परा।

6. Translate the following into idiomatic Hindi :— 20

The cuckoo is a migratory bird. It does not live in any particular part of the world for all seasons. It generally comes in the Spring and goes away by the end of Summer. This bird makes no nests for itself. It always lays its eggs in the nests of other birds, specially of the crow. It cleverly throws away the same number of eggs from the nest in which it lays its own eggs. The eggs are hatched there and when the young cuckoo learns to fly it goes away from the nest.

## URDŪ (SECOND LANGUAGE)

Paper-setter—MOULVI M. MAHFUZ-UL HAQ, M.A.

Examiner—MOULVI NASIR ALI KHAN CHAUDHURI, M.A.

## COMPULSORY PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English any two of the following:—

24

(a) اُس زمانہ میں ایک امیر آدمی کوئلے کی کان کا مالک تھا۔ اُس کو کان سے کوئلہ جہاز تک پہنچانے کی اشد ضرورت تھی۔ اتفاقاً جارج سے ملاقات ہو گئی۔ اُس نے ترغیب دی کہ تم کہو تو کان سے جہاز تک ریلوے بنا دوں۔ وہ راضی ہو گیا۔ چنانچہ ۲۸ ستمبر سنہ ۱۸۲۲ کو وہ بارہ میل کی سڑک کھولی گئی۔ \*

(b) ملہار راؤ ہلکے بپتے سے اُس کی شادی ہوئی۔ ابھی بیس برس کی بھی نہ ہونے پائی تھی کہ بیوہ ہو گئی۔ اُس کا شوہر اپنے باپ کے سامنے ہی اس جہان سے انتقال کر گیا۔ صرف ایک لڑکا اور ایک لڑکی یادگار چھوڑے۔ ملہار راؤ کی وفات کے بعد اُس کا پوتا جانشین ہوا۔ مگر نو سہینے کے بعد وہ بھی راہی ملک عدم ہوا \* (c)

دکان بند کر کے رہا بیٹھہ جو تو دی اس نے بالکل ہی لٹیا تیر  
فہ بھاگو کبھی چھوڑ کر کام کو توقع تو ہے خیر جو ہو سو ہو  
کئے جاؤ کوشش میرے دوستو  
جو پتھر پہ پانی پڑے متصل تو گھس جائے بے شبہ پتھر کی سل  
رہو گے اگر تم یونہی مستقل تو اک دن نتیجہ بھی جائے گا مل  
کئے جاؤ کوشش میرے دوستو

2. (a) Give an account of the life of either اہلیا بائی or شیر شاہ سوری

18

(b) Narrate the story of either Prince Fath Khān and the old woman, or the two brothers who went to America in search of gold.

18

3. (a) Give the genders of the following:—

5

کتاب - زمین - آسمان - آفتاب - چڑیا - درخت - نام - کاغذ - مصیبت

(b) Correct the following sentences:—

10

ہم کو اُس کا کچھ خبر نہیں ہے - آج احمد کا دکان بند ہے - دریا کی پانی بہت تھنڈا ہے - ہمارا مولوی صاحب آج نہیں آیا - آپ کی مزاج کیسی ہے -

4. (a) Give the plurals of the following:—

5

گھوڑا - گھڑی - بات - ترکاری - آنکھ - انگلی - توبہ

(b) Fill up the blanks:—

5

جب بڑے بھائی — معلوم ہوا تو کہا کہ آج کل کا موسم اچھا ہے —  
ہوا بھی موافق چل — ہے — بہتر ہے کہ یہاں سے جہاز — لنگر آٹھاؤ  
اور وطن پہنچکر اہل و عیال — خبر لو — خدا جانے اُن — کیا  
گذری \*

25

5. Translate into Urdu:—

- He has a book in his hand.
- He is coming to school.
- Can you see him?
- Do you know his father?
- Ahmad is sitting in the garden.
- John and Mary came to see me.
- He sold his land to Sarwar.
- Ram built that house.

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

10

ایک روز اُس نیک بخت بی بی نے سلطان سے درخواست کی کہ  
”ایک لونڈی باورچی خانے کا کام کرنے کو خرید لیجیے تو بہتر ہے - روٹیاں  
پکانے سے ہمارے ہاتھ جھلستے ہیں“ - سلطان نے جواب دیا ”شاہی خزانہ  
رعایا کا مال ہے - میرا حق اُس میں کچھ نہیں کہ روپیہ لے کر لونڈی  
خریدوں“ \*

2. Explain the following :—

10

تعریف اُس خدا کی جس نے جہاں بنایا  
کیسی زمین بنائی کیا آسمان بنایا  
پہرے تلے بچھایا کیا خوب فرش خاکی  
اور سر پہ لاجوردی اک سایہاں بنایا  
مٹی سے بیل بڑے کیا خوش نما آگائے  
پہنا کے سبز خلعت اُنکو جواں بنایا

3. Translate into English :—

80

مقصود اور محمود دو بھائی تھے۔ دونوں ایک ساتھ انٹرنس پاس ہوئے  
اور دونوں کی شادی باپ نے ایک ساتھ کی۔ شادی کے بعد دونوں بھائیں  
میں لڑائی ہو گئی۔ دونوں الگ الگ ہو گئے۔ اور جایداد بھی تقسیم  
ہو گئی۔ مقصود سب انسپکٹر ہو گیا۔ اس کے بعد انسپکٹر اور دس سال کے  
عرصہ میں ڈپٹی سپرنٹنڈنٹ پولیس ہو گیا۔ اس نے بڑی دولت کمائی۔  
مگر مرد بیچارے کو کوئی نوکری نہیں ملی اور آہستہ آہستہ اپنے باپ  
کی جایداد بھی بیچ کر کھا گیا۔ اتفاق سے اُس شہر میں پلیگ کا زور ہوا۔  
دونوں بھائی اور اُنکی بیویاں مر گئیں۔ دونوں نے مرے وقت در بچے  
چھوڑے \*

4. (a) Correct the following :—

6

- (۱) ہم آج تھاکہ جائیگا
- (۲) میں نے رھاں گیا تھا
- (۳) امیں اور اسکا بیوی ہم سے ملنے آیا تھا
- (۴) احمد خان کا بلی مر گیا

(b) Give the gender of any FOUR of the following :—

4

کھیل - سڑک - مورتی - شربت - عقل - نیند

(c) Fill up the blanks :—

5

ایک گاؤں — جلاہے رھتے تھے جو بہت ہی بیوقوف تھے — اتفاقاً  
کچھ شاہی نوکر خراج کا درپہ وصول کرنے — لئے اُس گاؤں میں آئے

اور گاؤں والوں — — فارسی زبان میں رویدہ مانگا - گاؤں والے فارسی زبان  
 — بالکل ناراض تھے - وہ سمجھے کہ ہم — گالیاں دیتے ہیں \*

5. Translate into Urdu :—

35

A man and a bear were once friends. The man went out for a walk, and the bear kept him company. After they had gone some distance, the man sat down under a tree and fell asleep. But his sleep was disturbed by a fly. The bear was angry. It struck the fly with its heavy paw; but in doing so it tore the man's cheek.

## URDU ALTERNATIVE SECOND LANGUAGE

(For Female Candidates)

Paper-setter—KHAN BAHADUR REZA ALI WAHSHAT

Examiner—MOULVI NASIR ALI KHAN CHAUDHURI, M.A.

### COMPULSORY PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English any TWO of the following extracts :—

20

(a) جب بڑے بھائی کو معلوم ہوا کہ ان لوگوں کا سرمایہ سب ختم ہو چکا ہے تو کہا "آج کل موسم اچھا ہے - ہوا بھی صاف چل رہی ہے - بہتر ہے کہ یہاں سے جہاز کا لنگر اُتھاؤ اور وطن پہنچ کر اہل و عیال کی خبر لو - خدا جانے ان پر کیا گذری اور تمہارے انتظار میں ان بیچاروں کا کیا حال ہوا" - چھوٹے بھائی نے نہایت ملول ہو کر جواب دیا کہ "جو کچھ اپنی جان کہتا کر اور صعوبتیں اُٹھا کر ہم نے کمایا وہ نو سب آپکی نذر کر چکے - اب خالی ہاتھ کیا جائیں \*

(b) کرے دشمنی کوئی تم سے اگر  
 جہاں تک ہے - تم کرو درگزر  
 کرو تم نہ حاسد کی باتوں پہ غور  
 جلسے جو کوئی اس کو جلسے دو اور  
 بدی کی ہو جس نے تمہارے خلاف  
 جو چاہے معافی تو کر دو معاف

نہیں - بلکہ تم اور احسان کرر  
 بھلائی سے اس کو پیشیمان کرر  
 ہے شرمندگی اس کے دل کا علاج  
 سزا اور ملامت کی کیا احتیاج  
 بھلائی کرر تو کرر بے غرض  
 غرض کی بھلائی تو ہے اک مرض

(۲) تھوڑے ہی عرصے کے بعد ایک انقلاب عظیم واقع ہوا - ابراہیم  
 لودھی مارا گیا - بابر فتحیاب ہوا - صوبدار بہار خود مختار بادشاہ بن بیٹھا -  
 اب فرید خان بہار کے نئے بادشاہ کا ملازم ہو گیا - ایک روز تلوار سے شیر کا  
 شکار کیا - اس دلاوری کے صلے میں شیر خاں کا خطاب پایا - پھر شاہ بہار سے  
 ناچاقی ہو گئی تو آکو بابر کے ہوا خواہوں میں شامل ہو گیا - بابری دربار کے  
 رنگ تہذیب دیکھ کر اس نے خوب جانچ لیا کہ اگر ہمارے پٹھان بھائی  
 باہمی نزاع کو دور کر کے یک دل ہو جائیں تو ان مغلوں کو ابھی دم کے  
 دم میں ہندوستان سے نکال باہر کروں \*

2. Write in your own words the story of the life either of Sulṭān Jalāluddīn Khiljī or of Ahliya Bāi. 20

3. Give the meanings of any ten of the following words :— 10

خجل - مسرور - کلفت - طمع - قلیل - مسکن - نزاع - تسخیر - اعضا -  
 التفات - مضطرب - نحیف - ہزیمت - اطاعت - مہارت

4. Correct the mistakes in the following :— 10

(۱) ہم لوگ کے پاس کچھ روپیہ نہیں ہے (۲) اگر ہم جانتے  
 تو ایسا نہیں کرتے (۳) تم نے روتی کھایا (۴) تم کل ہم سے  
 کچھ کہے تھے آج کچھ کہتے ہو (۵) ہماری مرغی کل ایک انڈا دی  
 (۶) ہم نے یہ کپڑا بازار سے خرید لائے (۷) ان لوگ سے تم کیا  
 پوچھتے تھے (۸) یہ بات کا مطلب ہم نہیں سمجھتے (۹) تم  
 کوئی بات کا مطلب نہیں سمجھتے ہو (۱۰) تمہارے نوکر کو بھیج دو

5. Give the rule for the use of نے after the nominative, and illustrate by examples. 5



6. Give the gender of the following :—

10

دعا - عرض - مطلب - مال - دولت - وقت - پیار - شکل - مزاج - حال

7. Translate into Urdū :—

25

Come and see what a fine day it is. Let us run off to the fields and play about, instead of going to school.

No, that would be very wrong.

What a strange boy you are, don't you like to play?

I like to play well enough, but not now. We ought to go to school and learn.

But you need not go just yet. Let us play about for an hour or two if you like. I don't like to study all day.

## KHASI ALTERNATIVE SECOND LANGUAGE

(For Female Candidates)

*Paper-setter*—MR. OWEN ROWIE, M.A., B.T.

*Examiner*—MR. ROY ROWLAND THOMAS, M.A.

### COMPULSORY PAPER

*Candidates are required to give their answers in their own words, as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

10+10

(a) Ha baka mynnyngkong u klew u long u tuga ka Sngi, u shong ryngkat bad ka Sngi ha bneng. Te ynda ha kawei ka Sngi kaba' phyrnai bha u klew u la iohih ia ki lyngkha tyrso ha ri madan ba la tap ia ki da ki syntiew kiba stem; katno ka jing-iltynnad! Kita ki lyngkha baroh ki jyrngam lam byrtem.

(b) U khla haba u khmih ia ki blang ba ki iaid-ki ieng u imat bang shibun ban bam doh, bad u ijem ruh ban jop ia ki lada un ialeh, hynrei kumno-re-kumno u shu isheptieng ba ka don ki reng bad u jiiuhmoh, bad haba ka tang shu iohih ia u ka byrngem, ka kynphut, bad ka kohnguh khlieh artad. Na kata ka daw u khla u sheptieng ia ka.

2. Iathuh bniyah katha phi lah ia ki niam-ki rukom ba iadci shaphang kaba Iap Briew, da jiew artad ia ki rukom jingthang.

20

3. Explain or compose sentences to illustrate the meaning of THREE of the following :—(a) *kier' langtylli*, (b) *ka blang jliäh sla mluh*, (c) *their sharyntoh*, (d) *u kyndang kuah*.

15

4. Explain with reference to the context :—Ym don ba lah ban shakri arugut ki kynrad.

10

5. Write in Khasi the story of *U Kada bad la ki Kynrad*, bringing out as clearly as you can the moral that can be derived from it.

15

6. (a) What are the different uses to which the word *ia* is put in Khasi? Give sentences to illustrate them.

12+8

(b) Give the the imitatives of FOUR of the following :—(i) *Khrew*, (ii) *Kynshew*, (iii) *Horkit*, (iv) *Sator*, (v) *Sin*.

## PORTUGUESE SECOND LANGUAGE

*Paper-setter & Examiner—DR. P. D. BRAGANCA CUNHA.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following into English :— 25

Oh ave do deserto, o meu coração achou o seu paraizo nos teus olhos.

Sao elles o berço da manhã e o reino das estrellas.

O seu abysmo devòra os meus cantos.

Deixa-me pairar n'esse oceu immenso e solitario.

Deixa-me fender as suas nuvens e desdobrar as minhas azas ao seu sol.

2. Render into Portuguese the following :— 25

Francis, you must at once take this letter to the post. Read here : 'Registered'. You will have it registered on payment of twopence. Here are 5 shillings : pay the registration and the postage and bring me ten stamps at a penny and as many at a halfpenny and twopence. For the rest bring letter-cards. It is most convenient to employ these latter for short communications, and it is well to be provided with them.

3. Write a short letter in Portuguese, asking your friend to come and spend his holidays in Calcutta. 30

4. Give the correct translation of 'Your', 'Yours' in Portuguese.

Translate :—

Have you got your paper ?

Where do you buy your pens ? 10

5. Translate :— 10

O aborrecimento é uma doença cujo remedio é o trabalho.

Soffreu quantos males ha no mundo

Um povo não tem ideas, para as quaes não tenha palavras.

## ORIYA ALTERNATIVE SECOND LANGUAGE

(FOR FEMALE CANDIDATES)

## COMPULSORY PAPER

Paper-setters— } Mr. MAHESWAR DAS, M.A.  
 RAI SAHEB ARTHABALLAV MAHANTI, M.A.

Examiner—MR. PRIYARANJAN SEN, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any ONE of the following passages into English :— 20

(a) ହଳଦୀଘାଟରେ ପ୍ରଥମଦିନର ଯୁଦ୍ଧ ସମାପ୍ତ ହେଲା, ପ୍ରତାପ ଅତ୍ୟଧିକ ରଣସ୍ଥଳରେ ନିର୍ଭାନ୍ତ ଅବସ୍ଥା ଏବଂ କ୍ଷତବିକ୍ଷତ ହୋଇ ପ୍ରିୟଦର୍ଶ ଅଳ୍ପ ଚୈତନ୍ଦ୍ରବୃତ୍ତରେ ରଣଭୂମିରୁ ଏକାକୀ ପ୍ରସ୍ଥାନ କଲେ । ଚନ୍ଦ୍ରମଣିରେ ମୋଗଲବାହିନୀ ପ୍ରତାପଙ୍କ ଅନୁଗାମିନୀ ହେଲା । ଦୁଇଜଣ ଯଦନବୀର ପ୍ରତାପଙ୍କ ପ୍ରାଣସଂହାର ନିମିତ୍ତ ଧାବିତ ହେଲେ । ଏତେ ଦୁରଗାମୀ ଅଶ୍ୱରାଜ ଚୈତନ୍ଦ୍ର ଯୁଦ୍ଧରେ ଅତ୍ୟନ୍ତ ଦୁର୍ବଳ ଓ ପଥଗ୍ରାନ୍ତ ହୋଇ ପଡ଼ିଥିବାରୁ ପ୍ରଭୁଙ୍କୁ ଆଉ ପୂର୍ବକରି ବେଶରେ ନେଇ ପାରୁ ନ ଥିଲା । ଯତ୍ୟବସରରେ ନନୈକ ଅସ୍ତ୍ରାରୋହୀ ବନ୍ଧୁକ ଯନ୍ତ୍ର ପଛେ ପଛେ “ହେ ନୀଳ ଅଶ୍ୱରାଜ” ବୋଲି ଡାକି ପ୍ରତାପଙ୍କର ନିକଟବର୍ତ୍ତୀ ହେଲେ । ପ୍ରତାପ ଚମତ୍କୃତ ହୋଇ ପଛ ଆଡ଼ରୁ ଚାହିଁ ଦେଖିଲେ ସେ ଅସ୍ତ୍ରାରୋହୀ ଚତାୟୁ ଅରକ୍ତ ରାଜା ‘ଗତିସିନ୍ଧୁ’ ।

(b) ସ୍ୱାସ୍ଥ୍ୟରକ୍ଷା ସମ୍ବନ୍ଧରେ ନାନାପ୍ରକାରବିଧି ନାନା ଗ୍ରନ୍ଥରେ ଲିଖିତ ହୋଇଅଛି । ଏ ପ୍ରକନ୍ଧରେ ସେ ସବୁର ଉଲ୍ଲେଖ ନିଷ୍ପ୍ରୟୋଜନ । ସ୍ୱାସ୍ଥ୍ୟରକ୍ଷା ପ୍ରତି ବିଶେଷ ରାଜରେ ହୃଷିକ୍ ଆକର୍ଷଣ କରିବା କେବଳ ଏଥିର ଉଦ୍ଦେଶ୍ୟ । ଶରୀର ସୁସ୍ଥ ନ ଥିଲେ ଜୀବନର କୌଣସି କାର୍ଯ୍ୟ ସୁସମାହିତ ହୋଇ ପାରିବ ନାହିଁ । କବିକୁଳସ୍ଥରୁ କାଳିଦାସଙ୍କର “ଶରୀରମାଦ୍ୟଂ ଖଲୁ

ଧର୍ମସାଧନ” ଏହି ଉକ୍ତିଟି ନିତ୍ୟ ସ୍ମରଣୀୟ । ଧର୍ମାର୍ଥକାମାଦିର ସାଧନରୂପ  
ଏହି ଗରୀରକୁ ଉତ୍ତମରୂପେ ରକ୍ଷା ନ କଲେ ଅନ୍ତର୍ନିହିତ ଗତି ସମ୍ପୂର୍ଣ୍ଣରୂପେ  
ଦୀର୍ଘ୍ୟ କରି ପାରିବ ନାହିଁ । ରୋଗ ମାନସିକ ଓ ଗାରୀରିକ ଉଭୟ  
ଗତିର କ୍ଷୟ ସାଧନ କରେ । ରୋଗ ନିରାକରଣର ଉପାୟ ଅନ୍ତେଷଣ  
ନରିବା ଅପେକ୍ଷା ଚାହାର ନିଦାନ ବୁଝି ସାବଧାନ ହେବା ବରଂ ଭଲ ।  
ଚିତ୍ତାନୁସନ୍ଧାନପୂର୍ବକ ସର୍ବଦା ପ୍ରକୃତ ପଥରେ ଯିବା ଆତ୍ମମାନଙ୍କର ଚୈବ୍ୟ ॥

2. (a) Test the truth of the statement—

10

ବାଦିର ଉନ୍ନତି ଅନୁସାରେ ରାଷ୍ଟ୍ରର ଉନ୍ନତି

(b) Clearly bring out the idea of—

ଏ ବିଶ୍ୱସରୀରେ ପବିତ୍ରପ୍ରୟାରେ

ଉନ୍ନତ କରି ରୁବନ . .

ଜ୍ଞାନ ପ୍ରେମ ରକ୍ତି ସ୍ୱରଗର ଗତି

ନିତ୍ୟ କରି ଉପାର୍ଜନ ।

10

3. Give a description of ନବଯୁଗ as is given by the author in ଉତ୍କଳ ଗାଥା ।

10

4. Write a short note on either ଗଢ଼ରାଚାର୍ଯ୍ୟ or ଉତ୍କଳିୟମ୍ନ ହିଣ୍ଡର

10

5. (a) Construct sentences with the nouns of the following words :—

6

ସୁରମାର, ଉଦ୍ୟତ, ଉଚିତ, ଚିତ୍ତରଞ୍ଜକ, ପରିବ୍ରଜ, ସ୍ତ୍ରୀ

(b) Give the feminine forms of—ଦେବସ୍ତ୍ରୀ, ଅରୀଷ୍ଟ, ଗାରୀରିକ, ବିଦେଶୀୟ, କୋକିଳ, ବଗ, ଭୂରା, ପାଣ.

4

6. Re-write the following, correcting all errors, with proper punctuations :—

10

ଗତ ଦୂର ବରଷ ହେଲା ଧାନ ଫସଲ ଉଥା ହେବାରୁ ଲୋକେ  
ବୀକ୍ଷେଷ କଷ୍ଟରେ ପଡ଼ିଅଛନ୍ତି ଦେଶରେ ତା ଆଗ ବରଷରୁ ଧାନ ମୁଗ

ସବୁ ଥିବାରୁ ରାଜା ଯଶା ହେଲେ ଜଣ ହେବ ଲୋକେ କହୁଥି ଅରାବରୁ  
ସରକର କରିପାରୁ ନାହାନ୍ତି କାମର ଅରାବଣୀ ପରିମାଣରେ ଲୋକେ  
ଆଲସ୍ୟତା ଆସୁଥି କଲେଣି । ଲୋକମାନେ ନାନା ପ୍ରକାରେ ଉପାୟ  
ବାହାର କରିବା ଉଚିତ ତାହା ହେଲେ ଦୁନା କନା ପାଇବାରେ ସକ୍ଷମ  
ହୋଇ ପାରନ୍ତେ ସରକାର ତାହାଦୂର ବା କେତେ ଲୋକଙ୍କୁ ସାହାଯ୍ୟ  
ପ୍ରଦତ୍ତକରିବେ ।

7. Explain the following passages in simple Oriya :— 20

(a) ବର୍ତ୍ତମାନ ନାନାଜାତୀୟଲୋକ ଯିଲ୍ଲହେପୁଣ୍ୟଦର୍ଶନ ଏବଂ ରୋଗ୍ୟ-  
ବିହାରାଦି ଦ୍ଵାରା ଚିତ୍ତବିନୋଦନ ଉଦ୍ଦେଶ୍ୟରେ ଶକଦ୍ଵୀପ ଯାତ୍ରୀ ହୁଅନ୍ତି ।  
ମନ୍ଦିର ମଧ୍ୟରେ ଅସଂଖ୍ୟ ହିନ୍ଦୁଦେବଦେବୀମୂର୍ତ୍ତି । ଗୋଟିଏ ଚତୁର୍ଦ୍ଵାର-  
ବିଶିଷ୍ଟଦେବାଳୟରେ ଯିବୁଲିଙ୍କ ପ୍ରତିଷ୍ଠିତ । ତାହାର ଚତୁଃପାର୍ଶ୍ଵରେ ଦ୍ଵାର  
ପାଳଗଣ ଦୀର୍ଘଦଣ୍ଡରୂପରେ ଦଣ୍ଡାୟମାନ, ମନ୍ଦିରରରିଭିର ସମ୍ମୁଖସ୍ଥ ମଣ୍ଡପରେ  
ବ୍ରହ୍ମା, ବିଷ୍ଣୁ, ମହେଶ୍ଵରଙ୍କର ମୂର୍ତ୍ତିସ୍ଥ ବିରାଜିତ । ମଧ୍ୟରେ ନାନାଲଙ୍କାର  
ରୂଷିତ କମଣ୍ଡଳୁଧାରୀ ବ୍ରହ୍ମା, ତାଙ୍କର ବାମବାଗରେ ପଞ୍ଚାପଦ୍ମାଦିପୁତ୍ରବିଷ୍ଣୁ ଓ  
ଦକ୍ଷିଣରେ ନୃମୁଣ୍ଡମଣ୍ଡିତ ପଦ୍ମଗରୁଷଣ ଯିବ । ଏହି ତ୍ରିମୂର୍ତ୍ତିର ଦକ୍ଷିଣ ପାର୍ଶ୍ଵରେ  
ବାମାଦିକାଳି ଅଦିନାରୀପୁର ବିଦ୍ୟମାନ ।

ପ୍ରାଣ ରାଣୀପଦେବେ

ପ୍ରାଣ-ପଦେବେ

ହୁଅଅଛି କନକ କିରଣ ।

ଆମା ପ୍ରୀତି ବିଶ୍ଵାସର

ସୁମାନସ-ସରୋବର

ହିଲ୍ଲେଲିତ ପୀତଳ ଘୋରନ ହେ ॥

## TAMIL ALTERNATIVE SECOND LANGUAGE

(FOR FEMALE CANDIDATES)

## COMPULSORY PAPER

Paper-setter & Examiner—MAHAMAHOPADHYAYA VEDANTAVISARAD N. S.  
ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Any six questions may be answered, among which*

*Question 7 must be one.*

1. (a) சாதியிரண்டொழிய வேறில்லை சாற்றுங்கால் 15  
நீதிவழுவா நெறிமுறையின்—மேதினியில்  
இட்டார் பெரியோர் இடாதார் இழிகுலத்தோர்  
பட்டாங்கிலிள்ளபடி.

- (b) ஆறிடுமேடு மடுவும் போலாஞ் செல்வம்  
மாறிடு மேறிடு மாநிலத்தீர்—சோறிடும்  
தண்ணீரும் வாரும் தடுமே சார்பாக  
உண்ணீர்மை வீறும் உயர்ந்து.

இவற்றின் பதவுரை, கருத்துரை, விசேட வுரைகளை யெழுதி  
இவற்றொலிந்து கொண்ட கடமைகள் யாவையென விளக்கவும்.

2. (a) தொட, (b) வேய், (c) வைதத பொருள், (d) இயல்  
(e) குவலயம், (f) ஈட்டும், (g) ஆவாரை, (h) நீர்மை, (i) கெம்மை,  
(j) சேடன.

இவற்றின் பொருள்களை யெழுதவும். 15

3. அடியிற்கண்ட சொற்றொடர்களில் பிணரியல் இலக்கணங்  
களை யெழுதவும்.

- (a) பொருண்முயர்சி, (b) இடித்துண்கை, (c) பெண்ணீர்  
மை, (d) நன்றனறு, (e) கடற்கரை, (f) தாந்தாமுன். 15

4. மாயமான், இராவணஸன்யாஸி இவற்றிவரலாற்றை விவரித்  
து எழுதவும். 15

5. விசுவாமித்திரருக்கும் தசரதருக்கும் நடந்தஸமவாதத்தைச்  
சுருக்கியெழுதவும். 15



(b) ప్రతి వేసంగి సెలవులలో గాని శీతాకాలపు సెలవులలో గాని రాష్ట్రములో నుండే ప్రభుత్వ పాఠశాలలలో అనగా బ్రయినింగు స్కూల్‌లోను కాలేజీలలోను నుండే ఉపాధ్యాయులలో విద్యాధికులను ఆహ్వానించి వారిచే ప్రత్యేక ఉపన్యాసములను ఒక్కొక్క శాస్త్రము పై యిప్పించుచుండవలెను.

2. Translate into Telugu :—

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Books are delightful society. If you go into a room filled with books, even without being taken down from the shelves, they seem to speak to you that they have something inside their covers that will be good for you and that they are willing and desirous to impart it to you. Value them and endeavour to turn them to account.

3. Expand the idea contained in the following proverb—

“తావలచినది రంభ.”

15

4. Write a short description of a wedding in simple idiomatic Telugu. 15

5. Write an essay in Telugu on any ONE of the following subjects :— 25

(a) Character-building in school life. •

(b) Child marriage and its evils.

(c) The right use of time.

6. What is the moral of Sitā's story. 10

## MALAYALAM AS SECOND LANGUAGE

(FOR FEMALE CANDIDATES)

(COMPULSORY.)

*Paper-setter and Examiner*—REV. C. E. ABRAHAM, M.A., B.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. കീഴകവധം വിസ്തരിക്ക.

Or,

വിരാടపర్వത്തിൽ നിങ്ങൾ പറിച്ച స్త్రోക  
ങ്ങളിലെ కమావస్థ చూపిస్తే అవుతుంది.

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2. പദം മുറിച്ച് അർത്ഥമെഴുതുക :—



- (a) ത്രൈലോക്യവന്ദ്യൻ, (b) ശാസ്ത്രോക്താ, 5  
 (c) ദീപ്തസാഗരം, (d) ചന്ദ്രബിംബാഭിരാമാനന്ദാഭോജം,  
 (e) ധനുവിദ്യ. \*

3. ബുദ്ധന്റെ ജനനസമയത്തെ വിശേഷങ്ങൾ വർണ്ണിക്ക. 10

Or,

ബുദ്ധന്റെ ഭൂതദയ ഉദാഹരിക്കുക.

4. വിശുദ്ധ വനോദ്യാനം വർണ്ണിക്ക. 10

Or,

യശോദരയെ വിട്ടുപിരിയുന്നതിന് മുമ്പായി ബുദ്ധൻ ചെയ്യുന്ന ആത്മഗതം ചുരുക്കി എഴുതുക. 10

5. (A) താഴെ കാണുന്ന പദ്യത്തിലെ (a) അഞ്ചു വാക്കുകൾ കൊണ്ട് അഞ്ച് വാചകങ്ങൾ ചമക്കുക :— 25

(B) താഴെകാണുന്ന വാചകങ്ങളുടെ (b) and (c) തെറ്റുതിരുത്തുക :—

(a) 'ദൈവഗതിക്കഥവാ ഭുവനേന്ദ്രിൻ നൈവ കവാടനിരോധമൊരേടം.'

(b) പുസ്തകവായന എനിക്ക് സന്തോഷിക്കുന്നു.

(c) താഴ്വ പണങ്ങളുള്ളവക്ക് ആരേണതുല്യം പോലെയാണു്.

6. Translate into English :—

(a) എന്നാൽ ബുദ്ധനാകട്ടെ തുരുനാഥന്മാരെക്കാൾ അറിവുള്ളവനായിരുന്നുവെങ്കിലും, വിശ്വാമിത്രനോടെന്ന പോലെ, മറെറൊരു തുരുനാഥന്മാരോടും ഭക്തിവിനയാദര പൂർവ്വം അനുവർത്തിച്ചുവന്നു. ആ കഥാരൻ പ്രിയഭാഷണ നായിരുന്നു എന്നാലും വിവേകവാന്മാരായിരുന്നു ; ഒന്നിനും

യെപ്പൊഴാത്തവനാണെങ്കിലും പരോപകാരശീലനം വിനയശാലിയും അതി ദയാലുവുമായിരുന്നു. മൃഗയയിലാകട്ടെ, ബുദ്ധനെപ്പോലെ ധൈര്യവാനായി സമവയസ്യരിൽ മറെറാവനം ഉണ്ടായിരുന്നില്ല. ചിലസമയങ്ങളിൽ കളിക്കുന്നതിന് മദ്ധ്യേ മാൻ മുതലായവയെ സ്വേച്ഛപോലെ പോവാൻ അനുവദിച്ചിട്ട്, ബുദ്ധൻ കളിവിട്ടു നോക്കിനില്ക്കും.

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(b) ബർലിൻ പട്ടണത്തിലെ കാഴ്ചബംഗ്ലാവിൽ ഒരു ഇരുമ്പുമുട്ട ഇരിപ്പുണ്ട്. അതിനെ സംബന്ധിച്ച് ഒരു രസകരമായ കഥ ഉണ്ട്. വളരെക്കാലം മുമ്പ് ഒരു പ്രഭുക്കുമാരൻ ഒരു പ്രഭുക്കുമാരിയുമായി സ്നേഹമായി. അവൾക്ക് ഒരു നല്ല സമ്മാനം കൊടുക്കാമെന്ന് പറഞ്ഞു. ഒരു ദൂതൻ വശം ആ സമ്മാനം കൊടുത്തയച്ചു. പ്രഭുക്കുമാരി സമ്മാനമായ ഇരുമ്പുമുട്ട കണ്ടപ്പോൾ കപിതയായി അത് നിലത്തെറിഞ്ഞുകളഞ്ഞു. ഉടനെ മുട്ടപൊട്ടി. അകത്തുനിന്ന് ഒരു വജ്രമോതിരം വെളിക്കുവന്നു. ഇതത്രെ ആ കഥ.

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(c) ബുദ്ധൻ ഒന്നും സംസാരിക്കാതെ അതെല്ലാം ഭക്ഷിച്ചുതുടങ്ങി. ആ സമയത്ത് സുജാത ഭക്തിയോടു കൂടി കുറെദൂരെ പോയിനിന്നു. ബുദ്ധൻ അതഭൂതകരമാം വണ്ണം ആരോഗ്യവും ശക്തിയുമുണ്ടായി. താൻ അതുവരെ ഉഴന്നും ഉറക്കവും ഇല്ലാതെയിരുന്ന അവസ്ഥ സ്വപ്നം പോലെ തോന്നി. മനസ്സിനും വളരെ ആഹ്ലാദമുണ്ടായി. ബുദ്ധന്റെ മുഖശോഭയും ദേഹകാന്തിയും വലിക്കുന്തോറും; സുജാതക്ക് ഭക്തിയും വലിപ്പാനു തുടങ്ങി.

15

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- " DEBENDRAKUMAR CHANDA, M.A.
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- " JOGENDRACHANDRA DAS, M.A., B.T.
- " KSHITISCHANDRA DASGUPTA, M.A.
- " NALINIBHUSHAN DASGUPTA, M.A., B.T.
- " BRAJAGOPAL DATTARAY, M.A.
- " BARINDRAKUMAR GHOSH
- " BEPINKRISHNA GHOSH, M.A., B.T.
- " MANINDRAKUMAR GHOSH, M.A.
- " ASUTOSH GHOSHAL, M.A.
- " GOLAM MUSTAFA, B.A., B.T.
- " KUMUDNATH GUPTA, M.A.
- " RANENDRANATH GUPTA
- " ASUTOSH HATI, M.A.
- " NITYANIRANJAN KABIRAJ, B.A., B.T.
- " NARENDRANATH MAJUMDAR, M.A.
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- DR. MD. ENAMUL HUQ, M.A., PH.D.
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- MR. DAKSHINARANJAN MITRAMAJUMDAR
- MAULVI MOHAMMAD FARAZUL HOSSAIN, M.A.
- MR. DHIRENDRAKRISHNA MOOKERJEE, M.A.
- " TARAPADA RAHA, M.A.
- " JNANENDRANATH RAY, M.A.
- " KULADARANJAN RAY
- " MAHADEB RAY, M.A.
- " NRIPATIKANTA RAY, M.A.
- " PRASANNAKUMAR RAY, B.A.
- " SATYARANJAN SEN, M.A.
- " SUKUMAR SEN, M.A.
- " SURENDRANATH SEN, B.A., B.T.

Examiners— { „ MANORANJAN SENGUPTA, B.A., B.T.  
(Contd.) „ PYARIMOHAN SENGUPTA  
MAULVI SHAIKH HABIBAR RAHAMAN, L.T.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate the full marks.

1. Explain with reference to the context two of the passages in Group A and two in Group B:— 24

GROUP A

(Any TWO)

(a) অপরের প্রতি প্রেমের বিস্তার যাঁসবোর পরম ঐশ্বর্য। যে যাহাকে ভালবাসে সে কখনও তাহার স্ত্রী দেখিয়া কাতর হইতে পারে না।

(b) তাঁহার জীবন ছিল কন্ঠের মহোৎসব; এই উৎসবের বিরাম ছিল না। শত শত যাত্রী লইয়া যেরূপ রেলগাড়ী দিবারাত্র চলিয়া যায়, শত শত কন্ঠী লইয়া এই বিশাল কন্ঠক্ষেত্রে তিনি সেইভাবে বিহাব করিয়া চলিয়া গিয়াছেন।

(c) স্বার্থের শক্তি অসীম— স্বার্থ বিশ্ব-বিভয়ী। জগতে রাজা, প্রজা, ধনী, নিধন, পণ্ডিত, মূর্থ, ভদ্র, ইতর, বন্ধ, যুবা সকলেই সময়ে স্বার্থের পদসেবা না করিয়া থাকিতে পারে না।

GROUP B

(Any TWO)

(a) ঘন বাজে শিখা বেণু গগনে গো-কুর-রেণু  
পথে চলে করি' কত ভঙ্গে।

যতেক রাখালগণ আবা আবা ঘনে ঘন  
বলরাম দাস চলু সঙ্গে ॥

(b) ধর্ম নহে সম্পদের হেতু,  
মহারাজ, নহে সে স্থখের ক্ষুদ্র সেতু,—  
ধর্মই ধর্মের শেষ।

(c) কাদম্বিনী বরষার সময়ে যেমন  
নিয়ত সলিলে করে ভূতল সেচন,  
আজ এ জনমভূমি আমার তেমন  
করিছে অন্তরে কত স্থখ বরিষণ।

2. Give in your own words the story of ভারতবর্ষ by S. Wajed Ali and the idea it seeks to express. 10

3. Quote from memory the FIRST EIGHT lines of আত্মবিলাপ by Michael Madhusūdan Dutt or সখা by Rajani Kānta Sen, or তিথারিণী ঘেরে by Mānkumārī Basu. 6

4. Amplify the idea contained in *either* of the following :— 15

(a) জীবনে যত পূজা হ'ল না মারী,  
জানি হে জানি তাও হয়নি হারা ।  
যে ফুল না ফুটিতে বরেছে ধরনীতে,  
যে নদী স্রবরথে হারা'ল ধার।  
জানি হে জানি তাও হয়নি হারা ॥

(b) চির স্থখী জন . ভ্রমে কি কখন  
ব্যথিত-বেদন বুঝিতে পারে ?  
কি ষাভনা বিষে বুঝিবে সে কিসে  
কতু আশীবিষে সংশেনি যারে ?

5. Translate the following into Bengali :— 15

Presently when the procession reached the burning-ghat, it became clear that the performance of the rite of *sati* was to take place. A woman was standing near the corpse, who was evidently the wife of the dead boy. She was waiting to be burned with him on the funeral pyre. The Emperor Akbar was strongly opposed to this cruel rite, and did all he could to prevent it. He ordered that no wife was to be so sacrificed except of her own free will. 'Abbās Khān immediately determined to see with his own eyes that the imperial order was not disobeyed in this particular case.

6. (a) Correct :— 6

পরিস্কার পর পরিতে পারা যায় না। তার চেয়ে একটু পুষ্পোদ্দানে  
ভ্রমণ করিয়া স্বাস্থ্য-লাভ করা ভাল। সকলে বিদ্যান হইবে এমন কোন কথা  
নাই। সৌজন্যতাই বেশী আবশ্যকীয় নয় কি ?

(b) Fill up the blanks in the following :— 4

মধ্যাহ্ন—রোদে দৌড়াদৌড় করিলে—হইতে পারে। স্তবরাং—  
খেলাধুলা না করিয়া অপরাহ্নেই—উচিত। শরীর—ভাল—থাকে,  
তখন শ্রম—কখনই উচিত—।

7. Write an essay on any ONE of the following subjects :— 20

- (a) Newspaper reading—its usefulness ; its drawbacks.
- (b) Dignity of labour—poverty and work—manual labour and false pride.
- (c) The career you wish to follow.
- (d) Improvement of village life—sanitation. medical relief, and co-operative banks.

## HINDI

**Paper-setter—MR. NALINIMOHAN SANYAL M.A.**

**Examiners—** { **MR. SIBNARAYAN LALA, A.I.S.A.**  
                              **„ KESARIKANTA SARMA, M.A.**

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain any TWO of the following:--- 18

(ii) जहां पर खुशनुमा रोसपट्टी और क्लारी-पाचें बने हुए थे, और जिनमें दुनिया भर के अनुष्ठे, रंगतदार खुशबूदार और तरबूदार गुलबूटे, बी पेड़ पत्ते बारासा थे, वहां पर अब बजाय उनकी आक, चतर, जंगली और कंटीली पौधों ने अपना दखल जमा लिया ।

(b) जिस एक ईश्वर, एक शास्त्र, एक तत्त्व, और अथवा दूरवर्ती एक ईश्वरीयपक्ष की ओर यह समय सृष्टि जी मधुर, मन्द, अदृश्य गति तथा अज्ञात रूप से चलायमान है, वह प्रेम कीड़कर दूसरा क्या ही सकता है ?

(c) चिंताज्वाला शरीरबन दांवा लागि लागि जाय ।

प्रकट ध्रुवां नहिं देखिये सर अंतर धंधुवाय ॥

उर चत्तर धंधुवाय जरै ज्यों काच की भट्टी ।

**जर गयी लोह मांस रह गई हाड की ठही ॥**

कह गिरिधर कविराय सुनी हो मेरे मिता ।

वे नर कैसे जियें जाहि तन व्यापत चिंता ॥

(d) \* भाव भाव की सिद्धि है, भाव भाव में भव ।

जो माने तो देव है, नहीं भौत की लेव ॥

आपा तजो औ हरि भजो, नखसिख तजो विकार ।

सब जीव तें निरबैर रहु, साधु मता है सार ॥

(e) ताहि मारि माकृतसुत बीरा ।

बारिधिपार गयउ अति धीरा ॥

तहाँ जाइ देखी बनशीभा ।

गंजत चंचरीक मधुलीभा ॥

नामा तरु फल फूल सुहाए ।

खग-खगहृन्द देखि मन भाए ॥

2. Narrate briefly, after Lāla Sītā Rām, the incidents at Ayodhyā which helped to bring about the last exile of Sītā. 12

3. Give after Nazir, a brief account of the birth of Sri Krishna. 10  
 4. Give the substance in Hindi of the following :— 15

एक व्यक्ति का अनुभव हमारे कार्य के लिये यथेष्ट नहीं है। कभी कभी उस अनुभव का प्रसङ्ग जीवन में एक ही बार आता है, और कभी कभी उस अनुभव से हम लाभ उठाने के पहले ही चल बसते हैं। इस लिये दूसरों के अनुभवों से हमें लाभ उठाना पड़ता है, और जितने अधिक लोगों के अनुभव हमें मिल सकें उतना ही अच्छा है, क्योंकि अधिक लोगों के और अधिक काल के अनुभव सार्वकालिक तथा सार्वदेशिक सत्य होते हैं। पुस्तकों में लिखे हुए अनुभव बहुधा इसी प्रकार के होते हैं, इस लिये उनका महत्त्व बहुत अधिक है।

5. Translate the following into Hindi :— 15

The important thing is not so much that every child should be taught, as that every child be given the wish to learn. What does it matter if the pupil knows a little more or a little less? A boy who leaves school knowing much, but hating his lessons, will soon have forgotten almost all he ever learned ; while another who had acquired a thirst for knowledge, even if he had learned little, would soon teach himself more than the first ever knew. Children are by nature eager for information.

6. (a) Form sentences to show the difference between the following pairs of words :— 5

कुल, कूल ; मुचि, सूचि ; तरणी, तूरणी ; स्त्री, पत्नी ; दुःख, शोक ।

- (b) Illustrate the different meanings of the following :— 5

गुण, पक्ष, तारा, पय, वंश ।

7. Write an essay on ONE of the following subjects :— 20

(a) The river Ganges : where it rises—description of three sacred towns through which it passes—its course from source to sea—two or three great rivers which fall into it— its greater importance before the opening of railways—why regarded as sacred by the Hindus.

(b) The bullock cart : its description—its defects— more suitable in India even now than other conveyances ; why?

(c) Cleanliness is next to godliness : a clean mind in a clean body—clean clothes—clean dwelling-house—clean surroundings— their connexion with health—the company of men with clean minds.

## ASSAMESE

*Paper-setter*—SM. SUKHALATA DAS, M.A., B.T.

*Examiners*— { MR. JATINDRANATH DOWERAH, B.A.  
 „ SURYYAKUMAR BHUIYAN, M.A.  
 „ DIBAKAR GOSWAMI, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain with reference to the context any two of the following :— 10

(a) ছেগা চোবোকা অমতকৈ বাহ লগোবা অমবগুণ সবহ । যি বস্তু

এক কোবত ভাঙিব নোৱাৰি, ওপৰাওপৰিকৈ কোবাই থাকিলে সিও ভাঙি যায়। একেবাহে গৈ থাকিলে দীক্ৰো বাটো লজিব পাৰি।

(b) লোভ বৰ বলবন্ত বিপু। তাৰ দণ্ডিত পৰি পৃথিবীৰ বহুত মানুহে নিকাৰ ভুঞ্জে আৰু আনকো ভুঞ্জায়। ইয়াক সেও কৰিবৰ উপায় অকল জ্ঞান। কিন্তু কেতিয়াবা জ্ঞানকো হুকুৱাই সি ওপৰ উঠে, জ্ঞানৰ উজ্জল পোহাৰতো চকুত ধূলি দি মানুহক লটিঘটি কৰে।

(c) ভগতপ্রখ্যাত তাজমহল আগ্ৰা নগৰত আছে। ই মোগল খিতাপৰ যুগমীয়া চিন, দাম্পত্য স্নেহৰ যুগমীয়া পটভূমি, আৰু মন্দিৰ গাঁথনিৰ অমূল্যমূল্য আহি, বুৰঞ্জীত এই মন্দিৰৰ বৰ্ণনা পঢ়িবলৈ পোৱা যায়, কিন্তু বৰ্ণনাৰ পৰা তাৰ আচল গঢ়পিটু মনত ধাৰণা কৰিব নোৱাৰি।

2. Answer ONE of the following questions:—

10

(a) Mention the advantages of studying *either* the lives of great men *or* nature.

(b) What practical lessons do you draw from the essay in Sarathi on *either* Personal Cleanliness *or* Industry?

3. *Either*, Give the summary of any TWO poems of "Sadari".

15

*Or*, Briefly describe the literary merits of the book 'Sadari'.

4. Give the meanings of any FIVE of the following words:—

5

আপুৰুগীয়া, অটব্য, গুলজাৰ, হেলেকুলেকীয়া, ওচমোচ, ধুঁৱাখুলীয়া।

5. Rewrite FIVE of the following words in their correct forms:—

5

উন্নতী, হিন্, অতীশয়, অগ্ৰাৰে, দাঙ্গৰিয়া, আৰ্ঘি।

6. Frame sentences with any FIVE of the following:—

5

পাবতগজা, কলিয়াপানী, চিৰ্চিৰীয়া, মানভগনৌয়া, ককৰ্ণনা, মটুমটীয়া।

7. Amplify the following in Assamese:—

15

শিকা সৰে পৰিভ্ৰম, শিকাৰে নীতিধৰম,

নেভাবিবী স্থখ দুখ কিনো কপালত।

কৰ্ত্তব্যৰ পাছে লৰা, ক্ৰমাগত কাম কৰা,

ফলাফল ফলদাতা বিভূৰ হাতত ॥

8. Translate into Assamese:—

15

We need not termble at the number of words it is possible to use. Our greatest writers find quite a small number sufficient for their purpose. Shakespeare with all his varied writings used only 15,000 different words. Milton needed only 8,000 different words for 'Paradise Lost'; while the Old Testament contains fewer than 6,000 different words. The beauty of writing and speech lies not in the number of words used, but in the choice and placing of them. Simple language is the most beautiful. The finest English writing is in the Bible, in 'Robinson Crusoe', and in 'The Pilgrim's Progress', and in each of these the language is so simple that a child may understand, while great scholars find equal delight in it.



9. Write an essay in Assamese on ONE of the following subjects:— 20  
 (a) The influence of climate on character.  
 (b) The place of science in education.  
 (c) The present condition of agriculture in Assam. How to im-  
 prove it.  
 (d) The value of travelling.

## MAITHILI

*Paper-setter*—KUMAR GANGANANDA SINGHA M.A.

*Examiner*—PANDIT BABUA MISRA JYOTISHACHARYYA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain, with reference to the context, any two of the following passages:— 20

- (a) धनुशयज्ञ जे कारण होइक उखव सकल समाज ।  
 दर्शनीय तनिकां हम देखल एके पय दुइ काज ॥  
 लौचन मे घन सार शलाका मनि लगइत छथि भावी ।  
 सधा रसैक छटा सुनि तन में के बुझ को अछि भावी ॥
- (b) अये हंसी चिन्ता चित परिहृक सुखिर रह ।  
 वियोगी न्या को विरह दिन धीरा अहं सह ॥  
 विशालाची देखू अछि न श्रियता अहं धयलि ।  
 सुशीला साध्वी हो निकट छथि प्राणेश अयलि ॥
- (c) मुह नहि देखब तोर, असंभाव्य पतिघातिनी ।  
 विषम हलाहल घोर, वर नहि जाइ पिचाय दे ॥
- (d) अथि देवर असुरादित भाता छथि शुनु आतुर हाक ।  
 जाल बिलम्ब पली भरि कर जनु पड़य चहै अछि डाक ॥

2. What impression do you get by reading 'Vivāha' by 'Bhola', and why? 10

3. Trace the descent of *Pāṇḍavas* and *Kauravas* as lucidly as you can. 10

4. Translate into Maithili:— 15

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta, who was an illegitimate member of the Royal family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount sovereign of India ( 321 B.C. ) with his capital at Pataliputra, the modern Patna and Bankipore.

5. Amplify in Maithili the idea contained in the following :— 15

कह सुकर्म सुकर्म कह बह देख बह झ-डाका ।

निखय चाहर खूब बल होएत; हाथ रहत जी टाका ॥

बसन्तहि की होएत-मछरीनी, पिलखकार बा रोटी ।

कुल गौरव की धी धी पाटव, धन के बाजि घाटी ॥

6. Express in one Maithili word the idea contained in the following :—

- (a) जकारा संगे स्त्री गहि हैक, (b) जकार माय बाप मरि गेल हैक और  
चपने असहाय नेगा चहि, (c) हर बलीनिहार, (d) माह बेचनिहार,  
(e) माटिक बरतन बनीनिहारक स्त्री ।

And

construct sentences in Maithili to illustrate the use of all the Samases.

7. Write an essay on any one of the following subjects :— 10

(a) *Newspaper*.—Its organization—its utility—How is it a power?—  
What place has it in India?—Conclusion. 20

(b) *Flood*.—Describe how it occurs—What are its immediate  
effects?—What are its remote effects?—What relief is needed?  
—The duty of the government and that of the people.

## MARATHI

*Paper-setter & Examiner*—M. M. PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay on any ONE of the following :— 20

- (a) The New Year's Day of your community.  
(b) Electricity and its wonders.  
(c) School friendships.

2. Amplify the following :— 15

समर्थ ज्ञात करि उत्सुकता मनाची ।

चिंता मनास उभवी परिपालनाची ।

देते सपास सुखदुःख हि राज्य तेजें

कायार्थ हव करिले सकारांत जेसे ॥ १ ॥

काव्य करावें व्यां नच वचकावें द्विती परि खचूस ।

न करावें काव्य सदन कीं त्यांत पुढें विलें करिले घूस ॥ २ ॥

पुण्या मध्ये प्रकट होव तेजो जराही  
 सटी'त एकहि रहल असें न काही'  
 व्यावा'धनी न उमटे खेच कूजितात  
 जाही'निगूढ इतिहास असा जगात ॥ १ ॥

3. Write what you know about पंचहीदमिश्रणप्रकरण and what you think about महादेव गोविंद रानडे as a man. 12

4. Express the ideas of the following :— 8

(a) असत्वांत ही बीलती सत्यवाणी ।

(b) ते' कंचे स्वर्गाच्या विविधविजयलाभहेतुकारांनी ।

5. Explain the following :— 15

मंदाकिनीमधिल जी' कनकारविंदे  
 ती' जेवितों सदुलनालसणालकंदे ॥  
 चांग्नी असों रुपसुते तरि कांचनाचे  
 जे कार्य ते भरिल की गुण कारणाचे ॥ १ ॥  
 जो मानसी' विहरती विहरी परीती  
 कां आमुची कुलसती असती करीती ॥  
 राखी नला निजयशीमयईस राया  
 आलों महीवर फिराद अशी कराया ॥ २ ॥  
 जे हे दिशापति विशालयशा अशांला  
 आशावशा कुवल्यांत दृशा कशाळा ॥  
 हा बील तूं न बद, तूज समीप येतो  
 चांग्नी मखी' निजमुखी' अवदान घेतों ॥ ३ ॥

6. Translate into English the following :— 15

मी परीचा देऊन परत आलों ते दिवशी' मला दादाजी' एकीकडे नेचून असा जो  
 उपदेश केला, ती मला फार सुंदर वाटला. ती असा :—ते ब्रह्माले तू आतां धंदा करू  
 लागण्यास समर्थ झालास. तू चांगला बुद्धिमान आहेस. धंद्यांत ब्रह्म मिलविण्यास लागणारे  
 सर्व गुण तुझ्या अंगी' आहेत. पण पैशाच्यालोभी' पडून तू लोकांचे तुकसान करू नकोस.  
 पैशाचा लोभ कठिण आहे. ती एकदा जडला म्हणजे सर्व आदीपत्ते' असें समजावे. सचोटीनें  
 वाग, त्यांत बरकत असते, हे पक्के लक्षांत ठेव वगैरे वगैरे. तू असा वागशील अशी मी  
 अशा करितो.

## 7. Translate into Marāṭhī the following :—

15

One great cause of our insensibility to the goodness of the Creator is the very extensiveness of His bounty. We prize but little what we share only in common with the rest, or with the generality, of our species. When we hear of blessings, we think forthwith of successes, of prosperous fortunes, of honours, riches, preferments, i.e. of those advantages and superiorities over others, which we happen either to possess, or to be in pursuit of, or to covet. The common benefits of our nature entirely escape us. Yet these are the great things. These constitute what most properly ought to be accounted blessings of Providence, what alone, if we might so speak, are worthy of its care. Nightly rest and daily bread, the ordinary use of our limbs and senses and understandings, are gifts which admit of no comparison with any other.

## NEPALI

*Paper-setter & Examiner*—RAI SAHEB HARIPRASAD PRADHAN, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## 1. Translate into Nepali any two of the following passages:— 40

(a) Shylock, the Jew, lived at Venice; he was a usurer, who had amassed an immense fortune by lending money at great interest to Christian merchants. Shylock, being a hard-hearted man, exacted the payment of the money he lent with such severity that he was much disliked by all good men and particularly by Antonio, a young merchant of Venice; and Shylock as much hated Antonio, because he used to lend money to people in distress, and would never take any interest for the money he lent; therefore there was great enmity between this covetous Jew and the generous merchant Antonio. Whenever Antonio met Shylock on the Rialto (or Exchange) he used to reproach him with his usuries and hard dealings, which the Jew would bear with seeming patience while he secretly meditated revenge.

(b) Brought up in the midst of such surroundings Ram Mohan early showed signs of religious bent of mind. His father desired that Ram Mohan should have a sound education, so that he might be properly qualified for the service of the Nawab. Ram Mohan was at first sent to the local pathsala, where he acquired considerable proficiency in Persian. His father sent him to Patna and Benares to learn Arabic and Sanskrit. The religious fervour of young Ram Mohan continued unabated all through his life. It is said that, at the age of fourteen, he was determined to retire from the world and become a sanyasi. It is also related that before he had reached his sixteenth year he was able to discuss religious matters on an equality with his father. But these discussions soon revealed that his religious views had taken a turn, the very thought of which alarmed his parents, friends and relatives.

(c) The mother of Uday Singh, the beautiful princess Karnavati, had led thirteen thousand Rajput ladies to the funeral pyre rather than submit to the Sultan of Gujrat, who besieged and captured Chitor three years before Bikramjit came to the throne. Before she sought the flames, she called her child's nurse, a loyal Rajput woman, whose own child had

been born on the same day as the little prince. Gently princess Karnavati laid her son in the nurse's arms, saying, 'Punna, I leave to you this sacred charge; see to it that no harm befalls your prince. For him is reserved the cushion of Mewar'. With tears in her eyes the nurse promised to guard the prince even with her life or the life of those most dear to her. Comforted by these assurances, the princess embraced her child, and with heart at rest, went to her doom.

2. *Either*, Depict in Nepali the character of Sharmista. 15

*Or*, Describe in Nepali how Sita is regarded as an ideal of Indian womanhood.

3. Fill up the gaps in the following passage:— 10

बाघ से छाती— का साथ ताटका धडाक— मा गिरी। त्यो निर्मा ले  
त्यहाँ की— ता यकै पथी, तर राबय— चति स्थिर राज्यलक्ष्मी पनी—। त्यो  
पक्षारि ने राबय— भाबी पतन— स्वपात पनी—। ताटका— मा पर्ना का  
साथ— छोडी परमधान मा—।

4. Write an essay in Nepali on any ONE of the following subjects:— 35

- (a) The value of industrial and technical education.
- (b) The evils of intoxicating drinks.
- (c) Plain living and high thinking.

## URDŪ

*Paper-setter*—MOULVI SYED MD. TAHIR RIZWI, M.A.

*Examiners*— { MAULVI NASIR ALI KHAN CHAUDHURI, M.A.  
KHAN BAHADUR REZA ALI WAHSIAT

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain, with reference to the context:— 15

قیّت صاحب کو گئے ہوئے کوئی گھنٹا بھر گذرا ہوگا - کہانے کا وقت  
قریب تھا کہ ہالیدیئرٹن صاحب گھر میں داخل ہوئے اور جلد در زینون  
ایک جَسٹ میں طی کرتے ہوئے اُپر پہنچے - مہیم صاحبہ کا رُخ کھڑکی کی  
جانب تھا - جین کی آنکھیں ہالیدیئرٹن صاحب سے دو چار ہوئیں - ہالیدیئرٹن  
صاحب کے چہرے سے انتشار ظاہر تھا - جین گھبرا کر فوراً اُٹھ کھڑی ہوئی

اور اُنکی طرف بڑھی ۔ ہالپرٹن صاحب نے جین کو اپنے کمرے میں بلایا اور نہایت ملایمت سے کہا ۔ ”جین ۔ تم مجھکو دیکھتے ہی سہم سی کیوں گئیں۔ مگر ہاں۔ تمہارا خوف کچھ بیجا بھی نہیں ہے ۔ میں تمکو ایک ناخوش خبر سننے والا ہوں ۔ تم سے اتنی امید ہے کہ دوسروں پر اس کے ظہر کرے میں میری مدد کر دے گی۔“ \*

2. Who was Julia, and how did she along with her husband defraud a rightful sharer in the properties left by their unole ? Answer fully in Urdu. 7

3. Write notes on any FOUR of the following:— 8

مسٹر ایشلی ۔ چارلی پیج ۔ ہنڈسلی ۔ ساموئل لین ۔ انڈنی ڈیر ۔  
ولیم ہالپرٹن

4. Explain fully the following: 15

A

نہ ملتے نے ہرگز جو آرزو بیٹھتے تھے  
سُجھتے نہ نے جب جھگڑ بیٹھتے تھے  
جو دو شخص آپس میں لڑ بیٹھتے تھے  
نوصدھا قبیلے بگڑ بیٹھتے تھے  
بلند ایک ہوتا تھا کرواں شرارا  
نواں سے بھڑک اُٹھتا تھا ملک سارا

B

Either,

ہوئے معرعوں سے آثارِ ظلمت  
کہ طالعِ ہوا مہاجرِ بُرجِ سعادت  
نہ چٹکی مگر چاندنی ایک مدت  
کہ تھا ابر میں ماہتابِ رسالت

پہ چالیسویں سال لطف خدا سے  
کیا چاند نے کہیت غارِ حرا سے

Or,

کہتا اک پہاڑوں سے بطحائے اُٹھی  
بڑی چار سو یک یک تھوم جسکی  
کرک اور دمک دور دور اُسکی پہونچی  
جو تیکس پہ گرجی تو گنگا پہ برسی  
رہے اُس سے محروم اُبی نہ خاکی  
ہری ہو گئی ساری کہیتی خدا کی

5. Give the opposite numbers of :—

5

۲۶۶

فضل - مذل - بدر - نجوم - بحر

6. Use the following in sentences :—

5

پانی میں رہنا اور مگر مچھ سے بھر - آنکھ میں سمانہ - ہاتھ دھونا -  
دم چھڑکنا - اپنے کو فضیحت دوسرے کو نصیحت

7. Translate into Urdu :—

25

(a) Once upon a time there lived a king and queen who had no children; and this they lamented very much. But one day as the queen was walking by the side of the river, a little fish lifted its head out of the water and said, 'Your wish shall be fulfilled, and you shall soon have a daughter'. What the little fish had foretold soon came to pass; and the queen had a little girl who was so very beautiful that the king could not cease looking on her for joy, and determined to hold a feast.

(b) One day a lad went to a famous teacher and, having expressed his desire to acquire knowledge, begged him to instruct him in the arts and sciences. The learned man, wishing to find out what sort of ability the lad had, asked him where God was. The lad replied, 'I will answer you if you will first tell me where He is not'. The sage from this sensible reply thought highly of the boy's understanding, and, according to his wishes, perfected him in his studies.

8. Write an essay on any ONE of the following subjects :—

20

- Famines: what they are—how caused—remedies—conclusion.
- Earthquakes: their causes—their horrors—relief of victims.
- The lessons of adversity.
- Sultāna Rāsiya.
- Chānd Bibi.

## MANIPURI

*Paper-setter*—MR. SANJIBAN NADIA SINGH

*Examiner*—MR. RAJ KUMAR SETHU SINGH, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, (a) Narrate the outline of the conversation between Mahadev and Parbati which was the origin of *Laiharaoaba* in Manipuri. 10

*Or*, (b) Describe a rough sketch of the character of *Birendra Singh* as depicted in your text book. 10

2. *Either*, (a) Give the gist of মৈতৈ কবি from your text book. 10

*Or*, (b) Give a brief account of তোমু লাইজিলেবী. 10

3. Write a brief account of how Arjuna introduced himself in the Darbar of Maharaja Chitrabhanu. 10

4. (a) Give the names of the principal holy places of Manipur. 3

(b) Give the ten names of Arjuna. 3

(c) Cite, from your text book, the origin of the language of the Manipuris. How was it formed. 2

(d) What is the meaning of “পুজিকা বর্ষ পালন”? 2

5. Amplify the following extract :— 15

ললোনবা কনবা নিগা অহুগী ময়মদা লক্ষীনা লেংলানা লৈ ।

6. Translate the following extract into Manipuri :— 15

Before this, Babar had often looked with longing eyes at the rich plains of Hindustan. Three times, he had gone down into the Punjab, to see what the Pathans of Hindustan were like, and how they fought. He saw that they had lost the strength of body and the strength of mind of their forefathers, for they had lived in the hot plains of India for hundreds of years. They were no match for the hardy Turks who had been born and bred in the cold uplands of Central Asia.

7. Construct FOUR short sentences with any FOUR of the following words :— 4

(a) নাজং, (b) শিগুমকী, (c) পরিকী, (d) উকংবা, (e) সায়োন, (f) মিশুমখিরা ।

8. Correct the errors in the following extracts :— 4 + 2

(a) রেলগাড়ী অমা মাতুল হাইগতুনা সত্ৰঙ্গী ময়াইবা আন্দামান মহাদেশ তমনা চংলমই । নোংমা অহুক নোংরাইগী মতমদা অয়েংবা নোং হুংশিং লাকলে ।

(b) চহি চনিরোমগী মমাংদা পৰিব নেওরাজ হাইনা কোঁবা মহারানী অমা মনিপুৰদা পালমখিগনি ।



9. Write an essay on any ONE of the following subjects:— 20

- (a) The evils of smoking.
- (b) How did you spend the last Doljatra holidays?
- (c) The benefits of keeping good health.

## KHASI

*Paper-setter*—MR. ROY ROWLAND THOMAS M.A.

• *Examiner*—MR. WILSON READE

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following passage into Khasi:— 15

Miranda, who thought all men had grave faces and grey beards like her father was delighted with the appearance of this beautiful young prince; and Ferdinand, seeing such a lovely lady in this desert place, and from the strange sounds he had heard expecting nothing but wonders, thought he was upon an enchanted island, and that Miranda was the goddess of the place, and as such he began to address her.

2. Compose sentences in Khasi using FIVE of the following expressions, giving the meaning of the expressions:—*Rngain, rngain, Siw siw, Ut-shi-ut, Pynshdd Khawiang, Pangshibat, Leit thung shried, U sim tyng-wieng.* 10

3. Thoh na ka *Kitap Jingphawar* shaphang ka jingsang. 15

4. Thoh na ki *Phawer U Aesop* ia ka jingiathuh khana kaba don kawei na kine ar tylli ki jingsneng:— 15

- (a) Ngin liat hi ha ka liewlep ba ngi riam ia kiwei.
- (b) Ka jingiaishah ka rat ia ki lum bad ka pyndap ia ki luh.

5. *Either*, Explain with reference to the context:— 10

'Ngi la lait na tyngam u khla te mynta sa ha ka shyntur u thlen du khat ei.'

Or, 'Ngi shemphanh ia ka jingshitom kiwei ynda ka la ktah ha la ka met hi.'

6. Thoh aiu phi tip shaphang ka ri Khasi lane shaphang ka thung syiem na ki *Dienjat jong ki Longshwa.* 15

Thoh Essay shaphang kawei na kine:— 20

- (a) Ki Hima jong ka Ri Khasi.
- (b) Ka jingim u riwsoh bad u nongdyndong.
- (c) Ka jingleh adkar.
- (d) Ka jynkieng Dawki.

## GARO

Paper-setter—REV. A. J. MURILL

Examiner—MR. F. W. HARDINGE

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Answer in Garo FOUR only of the following questions:— 40
  - (a) Tell the story of Abraham attempting to offer his son Isaac as sacrifice.
  - (b) What was the old Hebrew law about the cities of refuge, telling how those cities were used?
  - (c) Describe the miracle of Jesus raising Lazarus from the dead.
  - (d) Give in your own words the meaning of the twenty-third Psalm.
  - (e) Tell the story of the *Matgitchak aro Sepru*.
2. Expand or amplify ONE of the following into a paragraph:— 15
  - (a) Songni kamrangni gimin 'chiakolo donggipa bengblokrang mamungkoba uija.
  - (b) Anga mandarangni aro sagerarangni musikko aganoba; aro pilak ningtuaranko aro pilak uianikoba nioba, indiba angni kasaa dongjaode, anga mamung onja.
3. Translate into Garo the following passages:— 15
  - (a) There was no one else at home to play with, and Govind dearly loved to play. Games were his passion, and it was only by much scolding, and now and again a beating, that his father and mother could get him to do any work. There was always plenty of work in which a strong, healthy twelve-year-old could help. The big white field-bullocks and the meek-faced buffalo and her calf, who gave milk to the family, must be fed and cared for. Govind didn't mind feeding the fuzzy little buffalo calf with sugar-cane stalks, but he hated to carry water to the larger animals and clean the small shed in which they lived.
  - (b) I was carried by coolies in a chair, tied with two long bamboos. Two men carrying at a time, one in front, and one behind. At the end of the bamboo was a sort of harness, made of rattan and a kind of bark, which goes over the head of the coolie, attached to this is a small board which rests against the back of the coolie. The whole weight seems to be upon his head, he seems to use his hands simply to steady the weight.
4. Answer FOUR only of the following:— 12
  - (a) What is the difference in meaning between *saoba* and *amihā*?
  - (b) Explain the force of the affix *-osai* in the sentence *Ua nangko dokosai*.
  - (c) Explain the difference in meaning of the infinitive forms *-ne* and *-da* as used in *Aganbone* and *Aganboda*.
  - (d) What is the difference in the verbal endings— *-gen -nasia, -ginok, -gni*; as in—*nikgen, niknasia, nikginok, and nikgni*?
  - (e) What are the different plural endings—*-rang, -drang, and -mang* used to express in *Randerang, Rande-drang, and Randemang*?
5. Write an essay in Garo of from 200 to 300 words on ONE of the following subjects:— 18
  - (a) If you could visit another country, tell which one you would choose; why you would want to go there; and what you would do on your visit there.
  - (b) Contrast the life of the people living in the Hills of Assam with that of those living in the Plains.
  - (c) Tell how you spent your last summer vacation.

## PORTUGUESE

*Paper-setter & Examiner*—DR. P. D. BRAGANCA CUNHA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write in Portuguese the meaning of the following verses:— 30

(1)

Manhã de junho ardente. Uma encosta escaldada,  
Seca, deserta e nua, a beria d'uma estrada.

(2)

Terra ingrata, onde a urza a custa desabrocha,  
Bebendo o sol, comendo o pó, mordendo a rocha.

(3)

Sobre uma fôlha hostil d'uma figueira brava  
Mendiga que se nutre a predegulho e lava.

(4)

A auróra desprende, compassiva e divina,  
Uma lagrima etherea, enorme e cristalina.

(5)

Lagrima tão ideal, tão limpida que ao vê-la,  
De perto éra um diamante e de longe uma estrella.

2. Translate the following:—

25

O homem precisa alimentar-se para viver: se não se alimentasse, morria. Os homens alimentam-se de carnes, e também se alimentam de vegetaes. As carnes e os vegetaes, chamados alimentos solidos, ou comidas, matam-nos a fome. Ha alimentos que nos engordam; e outros que não nos engordam, mas pelos quaes é conservado ao corpo o seu calor natural. Os animaes e os vegetaes fornecem-nos os alimentos sólidos; mas alem d'estes, precisamos também de bebidas. As bebidas matamnos a sede. O nosso corpo é formado de muitas substancias. Entre as substancias que formam o nosso corpo figura a agua.

3. Write a short essay in Portuguese on 'Antes só que mal acompanhado'. 80

4. Write short sentences with the following idiomatic expressions:—  
'dar os pesames', 'fazer as suas despedidas', 'as mais das vezes', 'dar batalha'.

15

## ORIYA

*Paper-setter & Examiner*—MR. MAHESWAR DAS

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into elegant Oriya any ONE of the following passages:—15

(a) It was said long ago, and it has been frequently repeated that 'the proper study of mankind is man'. And the study of man can never be complete unless it includes the study of religion, for there is no more impressive or significant thing in his history than religion. Whatever may

be one's private opinion concerning religion, one cannot but admit that it is a most important and outstanding feature of human life. It is, indeed, in many ways the biggest thing in the world. Whoever takes a comprehensive survey of human experience soon discovers that religion has from the earliest times occupied a central place in life and history.

(b) Thus saying toward the city he was gone in pride of heart, rushing like some victorious horse in a chariot, that runneth lightly at full speed over the plain; so swiftly plied Achilles his feet and knees. Him the old man Priam first beheld as he sped across the plain, blazing as the star that cometh forth at harvest-time. Brightest of all is he, yet for an evil sign is he set, and bringest much fever upon hapless man. Even so on Achilles' breast the bronze gleamed as he ran. And the old man cried aloud and beat upon his head with his hands, raising them on high, and with a cry called aloud beseeching his dear son.

2. *Either*, Write, in a paragraph of not more than fifteen lines, the teachings inculcated in କାକବାରତା by N. K. Bul. 10

*Or*, Give the substance of ଶରତ in Rutuchitra.

2. Explain, with reference to the context, any ONE of the following groups :— 20

#### GROUP A

(i) ପ୍ରକୃତର ପ୍ରିୟସୂତ୍ର ଲଜ ସୃଷ୍ଟି ଅଧିକାରୀ

ରାଜ୍ୟ ତବ ଦେଲେହେଁ ମହାନ ।

କୋଟି ରାଣେ ଗଣ୍ଡାୟନ ମାନବମାନସ ରାଜ୍ୟ

କି ଦୁର୍ଲ୍ଲଭ ଅହେଇ ଭଗବାନ ॥

ବିଶଦୟା ପ୍ରୀତି ସ୍ନେହ କରୁଣାବିଭକ୍ଷା ଯୌର୍ଯ୍ୟ

ପରିକ୍ରମା ସାହସ ବିଶ୍ୱାସ—

ଦେବଗୁଣେ ବିଭୂଷିତ ନର ନାରୀ କଣ ସୃଷ୍ଟି

ଜଗତରେ ପାପରାଜ୍ୟ ନାଶ ।

(ii) ଦେଖୁ ଦେଖୁ ଦେମନ୍ତର ପୂର୍ଣ୍ଣ ଶଶଧର ଜ୍ୟୋତିର୍ମୟ ସୁବଦନ  
ରଜତଚକ୍ରବର୍ତ୍ତ ସମ୍ପଦ ଦେଲେ । ଅଜ୍ଞତ ଐନ୍ଦ୍ରିକାଳକ ଶକ୍ତିପ୍ରଭାବରେ ଦବସର  
ବୌଦ୍ଧିକାନ୍ତ କର୍ମଶାଳୀ ପ୍ରକୃତ ଦୃଷ୍ଟିରେ । ମେଘଶୂନ୍ୟ ନିର୍ମଳ ମାଳା-  
କାଶରେ ଗୋଟିଏ ଯୋଡ଼ିଏ ନକ୍ଷତ୍ରର ଲହାକାରେ ଜଳମେଷ ଦୃଷ୍ଟି ପୁଷ୍ପରାଜ  
ଚନ୍ଦ୍ରକରଣ ଭେଦ କରି ପୃଥିବୀ ଉପରେ ପଡ଼ିଗଲା ।

## GROUP B

(i)

ନୃହେଁ ସସାର ସୁଖଶାନ୍ତର ସ୍ଥାନ

ଭୁଞ୍ଜଇ ନର ଏଥୁ କଷଣମାନ ।

ଘୋର ବିକଟ ଷଡ଼ରସ ଦାନବେ

ବ୍ୟଥିତ କରୁଛନ୍ତି କ୍ଷୁଦ୍ର ମାନବେ ।

ଆରକ୍ତନେତ୍ର ହୋଧ-ଅଜ୍ଞାନ ନର

ବଜ୍ରମନ୍ତେ, ବିକର ଲୁବାକ୍ୟ ଶର

ସେ ଅଗ୍ନିବାଣି ବିଷ୍ଣୁ ଶିଷ୍ଣୁ ହୃଦୟ

ବିକଳ ହୋଇ ହୁଏ ରୁଧିରମୟ ॥

(ii) କୋ ଦର୍ଶନେ ଶୁଦ୍ଧେ ମେଘରେ ମୋ କର୍ଣ୍ଣେ

କାହାର ଦୂର ଆହ୍ୱାନ ?

ଅଜ୍ଞତଲକ୍ଷ୍ୟର

ଅସ୍ପଷ୍ଟ ମୂରତି

ପରଶେ ମୋର ପିରଣି ।

ବିଷାଦର ଶ୍ଳୟା

ପତିତ ହୃଦୟ

ହୃଦୟେସେ ଘନ ଘନ

ବିଗତଜନ୍ମର

ସୁଖମୂର୍ତ୍ତି ଅବା

ଅଲକ୍ଷେ ଦେହେ ମୋ ମନ ॥

4. (a) Illustrate the use of any four of the following expressions :— ମୁଁ ତ ଭାଙ୍ଗି ଦେବା ; ସୁହସାନ୍ତ ; ବାନା ବାଜିବା ; ତେଲିଆ ମଥାରେ ତେଲ ; ଘରଢିକି ଲୁମ୍ପିର ; ଗୁଣ୍ଡାମାରିବା ।

(b) Give the antonyms of any five of the following and illustrate then in short sentences :—ନୈସର୍ଗିକ ; ପ୍ରବଳ ; ଶକ୍ତି ; ସୌଜନ୍ୟ ; ସନ୍ଦେହ ; ସଙ୍ଗୀତ ।

(c) Re-write the following, correcting all errors :—

ଗୁଣ୍ଡାମାରିବାଦର ମଥାରେ ବସିବୁ ଘରଢିକି ଲୁମ୍ପିର ପକ୍ଷୀମାନଙ୍କ କର  
କହୁଛନ୍ତି ଗୁଣ୍ଡାମାରିବାଦର ଉପଦେଶ ପ୍ରବଳକର ଓ ସୌଜନ୍ୟର ଛବି ମୋହର  
ନୃସିଂହ ହୃଦୟରେ ଶେକ ବିସଦୃଶ୍ୟ କାଶ ପର ମର୍ମବେଦନା ପ୍ରଦାନ କରୁଅଛନ୍ତି ।

ସମ୍ପର୍କ ସ୍ଥିତି ବିବାହନ ଦୁଃସ୍ବରେ ଏକାନ୍ତ ଅଧର ଓ ଅସ୍ବଚ୍ଛନ୍ଦ ହୋଇ ମର୍ଲୀନ ଓ ବିକଳ ହୋଇ ଯିବିଲେଣି । ତାହାଙ୍କର ସୁକୁପସ୍ଥିତ ସ୍ବପ୍ନରତ୍ନକୁ ମୁଖ ମୁଖ ହୋଇ ଗଲଣି ।

5. Write paragraphs on any TWO of the following, proverbs :— 15

ଭରୁ ଯେବେ କରୁ କାହିଁ କି, କରୁ ଯେବେ ଭରୁ କାହିଁ କି, ଫଳିଲ ଗଛ ଘୋଷଡ଼ ସହେ ; କହୁତ ମଣିଷରେ ମୁଖା ମାରି ନ ହୁଏ ।

6. Write an essay on any ONE of the following subjects :— 20

(a) Benefits of travelling.

(b) Earthquake.

(c) The description of a marriage ceremony in Orissa.

## GUJRATI

*Paper-setter & Examiner*—MR. HARGOVIND DAS SETH.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. નીચેની વાર્તાઓ પૈકી એકને તમારા પોતાના શબ્દોમાં લખો અને તેનો સાર સમજાવો :— 20

(ક) ઢેડ ગુર.

(ખ) ધક્કાહીમ અને લોટ.

(ગ) સિંહ અને લક્ષ્મીપોદ.

2. નીચે લખેલા વિષયોમાંથી એક પર નિબંધ લખો :— 20

(ક) આરોગ્ય.

(ખ) સારાં પુસ્તકો.

(ગ) કસરત.

3. નીચે આપેલ ફકરો તમારા પોતાના શબ્દોમાં સમજાવો :— 15

“મિત્રની ફરજ માત્ર જીવનો કે ધનનો ભોગ આપવામાં સમાપ્ત થતી નથી. સારી શિખામણ-ખરા મનની શિખામણ-જીવ અને દાનના ફરતાં પણ્ય ધણીવાર મેંઘી હોય છે. એક મિત્ર કે-કુછ-અનીતિને માર્ગે ચાલતો હોય ત્યારે એને એમાંથી વારવો એ બીજા મિત્રની ફરજ છે. એમ કરતાં અણગમો-અપ્રીતિ-દોષ પ્રાપ્ત કરવાનો પ્રસંગ આવે તે તેથી ડરવું નહિ. સત્ય-શુદ્ધ મન-પ્રવૃત્તિ મન-મૈત્રિમાં આવશ્યક છે.”

4. नीयेनी कडीओ तभारा पाठ्य पुस्तकमां क्ये स्थणे आवी ते तेना अर्थ साबे लभो :— 15

- (क) सरपना लेछ परमाणु, जपाटांमां स्थणे आणु;  
 उतारं सर्वथा थाक, सकण मुज यित्तमां पाक.  
 (ख) जेम नदीमां बागीरथी, तेम श्यांमां श्रेष्ठ सर्वथी;  
 तणु लोकमां जेडी नथी, जणु सागरथी काढी भथी.  
 (ग) अरै प्रारब्ध तो धेलुं, रहे ते दूर भांजे तो;  
 न भांजे होइतुं आवे, न विश्वासे कही रहेजे.

5. तभारा काव्य-पुस्तकमांथो कया कविनी कृतियो तभने वधु गमे छे ते लभो. ते गमवानां कारणु क्षयि आने ते कविना कोछ पणु ओक काव्यनो दुंक सार आपो, 10

6. नीयेना शण्डोनो अर्थ लभो आने ते दरेकने तभारा पोताना अनावेला जुदा जुदा वाक्यमां वापरी देभाओ. 10

मूर्धाभिषिक्त, अराजकता. संशयजनक, भ्रमभेदक, मित्रवत्सल.

7. नीयेना इकरानुं शुजरातीमां भाषांतर करो :— 10

The people of Kānyakubja having lost their prince, the kingdom became a prey to disorder. Then a minister named Bapi who enjoyed much influence spoke thus to his colleagues : 'The destiny of the kingdom is going to be decided to-day. The eldest son of our first king is dead ; the brother of that prince is benevolent and humane, and Heaven has endowed him with filial piety and respect. By the impulse of his heart he will love his relations and will have confidence in his subjects. I would desire to see him inherit the kingdom. What do you think ? Let each one of you speak his sentiment.'

## TELUGU

Paper-setter & Examiner—DR. B. RAMCHANDRA RAU, M.A. PH.D.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate the following passage into idiomatic Telugu :— 25  
 I was then a clerk in the statistical section of the Customs Office with the high hope of becoming one day the Superintendent of the Section. Being young and from College I attended to my work with flaming zeal, but I was soon to know that my superiors were a set of crusted Philistines who crystallized all warm blood. Years passed on, but no promotion ; the asymptote of hope quivered a sickening quiver, then coiled itself into sullen reconciliation. It was a Sunday afternoon in June. I attended to

'urgent' papers on holidays and escaping from the musty files and the mustier air of the office, mooned about the harbour for an hour or so, looking at the coolies and the cranes at work. The sea-breeze blew with a hushing tenderness; the lapping of waves and the chuff-chuffing of motor-boats as they cut the waves came in as melodious sea-sounds. The influence all round breathed balsamic sleepiness; in fact its warmth was getting on me; but there was the wife at home waiting for me, and remembering my promise to her of a speedy return I walked out of the harbour.

2. చ్చవనుని పుత్రాంతము మీ స్వంత భాషయందు విపులముగా వ్రాయుడు. 20

3. "సుమఖాల" యొక్క కథను గురించి నొక వ్యాసము వ్రాయుడు. 20

4. Explain the following passage in your own words:— 20

కీడు నధికులొడ దొడరిన బాడిచిన నొడిచినను  
పురషగుణంబేర్పడు గాక హీనునొడుచుట, కడిదియె పౌరుష  
ముదాన గలుగునె చెపుమా

5. Write an essay in Telugu on— 25  
'Village Life and its Happiness.'

## TAMIL

Paper-setter & Examiner—RAO BAHADUR L. K. ANANTAKRISHNA IYER,  
B.A., B.T.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Give the meaning of the following verses in your own words:—

(a) కిలాయ నమవెன்று చింతిత త్తిరుప్పోర్క  
కపాయ మోరునాన్రు మిలలె—ఁబాయమ్  
ఇతియే మతియాక్ర మల్లత వెల్లలమ్  
వితియే మతియాయి విడమ్. 5

(b) శ్రువారై యారే శ్రుతిప్పా రతువన్రిశ్  
శావారై యారే తవర్ప్పవర్—శ్రువామల  
జయమ్ పుక్రవారై యారే విలక్కువార్  
మెప్పయమ్ పులియతన్. 5



- (c) நீரும் நிழலும் நிலம்பொதியும் நெற்கடமும்  
பேரும் புகழும் பெருவாழ்வும்—ஊரும்  
வருநதிநீவும் வாழ்நாளும் வஞ்சமிலர்க் கெனறுந்  
தருஞ்சிவந்த தாமரையாடான்.

5

2. Give a short account in your own words of the moral precepts which you learn from *Nal Vazhi*.  
(நலவழி).

8

3. Who is the author of *Nal Vazhi*? State what you know of him.

6

4. Give in your own words the character of Bhishma, Drona and Sri Krishna as described in *Balabharatam*.

15

5. State what you know about the marriage of either *Sitha* or *Draupadi*.

6

6. Write in your own words in Tamil the substance of ONE of the following:—

(a) வாசி தீரவே

காசு நல்கிடீர்

மாசில் மிழலையீர்

ஏசலில்லையே.

5

(b) அற்றங் கரையின் மரழு மரசறிய

விற்றிருந்த வாழ்வும் விழுமனறே—ஏற்றம்

உழுதுண்டு வாழ்வதற் கொப்பில்லை கண்டீர்

பழுதுண்டு வேளோர் பணிக்கு.

4

7. State what you know about திருஞானசம்பந்தர் and

சுந்தரமூர்த்தி நாயனார்.

6

8. Translate into Tamil any two of the following passages:— 15

(a) It is our proud boast that every Englishman's house is his castle, but it ought to be more ; it ought to be his home. That it is his castle is his right by law ; to make it a real home depends upon himself.

(b) A house without love may be a castle or a palace, but it is not a home. A home without love is no more a home than a body without a soul is a man. Love is the life of a true home.

(c) Your home may be humble, ugly, even cold and uncongenial, but your place and your duty lie there ; and the greater the difficulties the richer will be the reward.

9. Write a letter to your friend on ONE of the following subjects:— 20

(a) A journey from Calcutta to your native place.

(b) Progress of your studies and choice of profession.

## MALAYALAM

*Paper-setter & Examiner*—RAO BAHADUR L. K. ANANTAKRISHNA IYER,  
B.A., L.T.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) സിതാപരിത്യാഗത്തിന് കാരണം എന്താകുന്നു? 5

(b) മഹാബലിയുടെ രാജ്യഭരണത്തെ പറ്റി ചുരുക്കമായി എഴുതുക. 5

(c) മഴക്കാലത്തിന്റെ ആരംഭലക്ഷണങ്ങളെ ചുരുക്കമായെഴുതുക. 5

2. താഴെ എഴുതിയ പദ്യങ്ങളുടെ അർത്ഥങ്ങളെ വ്യക്തമായെഴുതുക :—

(a) വാനോർനദിപുരെ വാനരതളീടന്ന  
ദീനാനുകമ്പിയാം കൃഷ്ണൻ തിരുവടി  
ദീനംകളഞ്ഞെന്നെ രക്ഷിച്ചു കൊള്ളുന്ന  
മാനന്ദമുള്ളിൽ പതുരെ പതുത്തണം.  
ചെമ്പക നാട്ടിന്ന അലങ്കാര ഭൂതനാം  
തമ്പുരാൻ ഭദ്രവനാരായണ സ്വാമിയും  
കമ്പം കളഞ്ഞെന്നെ രക്ഷിച്ചു കൊള്ളുന്നത്.  
കുവിട്ടുന്നേനിന്നു നിൻപാദാംഭോരഹം. 6

(b) ചൊല്ലുവാൻ ഭരണാത്മക മുമ്പിൽ നിന്നെ  
നീക്കിപ്പോൾ

ചൊല്ലാമെങ്കിലും തവ വല്ലഭൻ നിരയാഗത്തെ.  
ചൊല്ലുന്നു പുരവാസിജനങ്ങളെല്ലാം തന്മിൻ  
വല്ലായ്മയത്രേ സീതാദേവിക്കെക്കൊണ്ടും  
രാവണൻ കൊണ്ടുപോയി ലങ്കയിൽ വെച്ചു  
കൊണ്ടു

ദേവിയെ പരിഗ്രഹിച്ചിട്ടുവാൻ ന്യായമില്ല. 6

3. താഴെ എഴുതിയ പദങ്ങളുടെ അർത്ഥങ്ങളെ പ്രകടമാ  
യെഴുതുക.

രാഗഭാരണം — ചേർപ്പി — താപസാശ്രമം —  
മാന്ദി — മൈമിളി — ജാഹ്നവീതിരേ — ഖിന്നൻ —  
പയ്യങ്കം. 8

4. താഴെ എഴുതിയ പദങ്ങളെ സമാസിക്കുക —  
താരിൽ മാനിനി — അമിത്രാന്തകൻ — കാമ്യഭാരങ്ങൾ —  
ഈപധർമ്മം — ദിവ്യഭാരതി — പരമാത്മ മഗ്നൻ. 6

5. Translate any two of the following passages into Malayalam:—  
15

(a) What makes a 'Home'? Love, sympathy, and confidence. The memories of childhood, the kindness of parents, the bright hopes of youth, the sister's pride, the bright sympathy and help, the mutual confidence, the common hopes, interests, and sorrows; these create and sanctify the home.

(b) It is a good rule to blame in private, and praise in public. What is said in private will be accepted in better spirit and will readily have more effect; while praise in public is much more encouraging and a richer reward.

(c) Be very careful in the selection of your friends, keep good company, and you will be of the number. Tell me whom you live with, and I will tell you who you are. A man who is not a good friend to himself cannot be so to any one else. Friends will protect you from many dangers, and ward off many sorrows.

6. (a) “ബൗദ്ധനെ സേവിച്ചു ജീവിക്കുകയെന്നതിനായി  
 ലുപ്തം പലിച്ചു മരിക്കു തന്നെ ശുഭം.” 8

(b) “സ്രീനാഥശിക്ഷിത പട്ടഭവമനുഷ്ഠിതം  
 സന്തുഷ്ടഭവകീമുത യാഃപ്രതിഭവോധവത്സ്യഃ” 8

(c) ‘Frailty, thy name is woman.’  
 മലയാളത്തിൽ പദ്യരൂപം, മൂന്നാമത്തെ വാക്യം —  
 ആൻ ആരെഴുതാൻ ഏതസന്ധർഭത്തിൽ പറഞ്ഞിരിക്കുന്നു,  
 വിശദമായി എഴുതുക. 8

7. Write a letter in Malayalam to your friend on ONE of the following subjects:— 20

- (a) Choice of profession.  
 (b) Advantages of travel.

## BURMESE .

*Paper-setter*—MAUNG BA, B.A.

*Examiner*—PROF. PE MAUNG TIN, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. ကင်းဝန်မင်းကြီးပြင်သစ်နိုင်ငံသွားနေစဉ်မှတ်တမ်းတွင်ရေး  
 သားဝေါ်ပြထားသောခရီးစဉ်ကိုအထွင်းချုပ်၍ရေးပြပါ။ 10

2. အောက်ပါစာပိုဒ်ကိုထည်မည်သည့်စာကိုယ်၌ပါရှိပါသနည်း။  
 စကားစဉ်နှင့်တကွအဓိပ္ပာယ်ဖော်ပြပါ။— 20

(က) စေ့စေ့စေ့စေ့၊ ဖြစ်ထူးထွေထွေ၊ သက်သေထံဆိပ်၊ ပုံခတ်  
 နှိပ်ဆုံ၊ မဆိပ်ဆီးဝောက်၊ တောဆင်ပေါက်နှင့်၊ မိုးသောက်ကြက်  
 တင်၊ နေဝင်ထောက်ထွန်း၊ ဥဒါန်းဖြစ်လေ၊ ဆရာဝေသား၊ ထင်း  
 ခွေတပည့်၊ အိပ်ကြိုးသည့်ကြောင့်၊ မပြည့်ထိုအင်၊ မျက်စိပင်တည့်၊  
 မပြင်မွဲတေ၊ ဆုံးထူးချေဖျိုး။

(ခ) စိန်ကျောက်တရုတ်၊ ထိန်တောက်သည်၊ ရောင်ခြည်

အထား၊ ထောကျားစာနည်၊ ထောင့်တသည်အချိန်၊ ယားရာကိုဖြင့်  
 ကိုက်၊ ရိုက်ထိုက်ချည့်မထွေ၊ ထိုထိုမရှောထိုးကို၊ မိုးကြိုးနှင့်အကျယ်  
 မက်သာစုံဆန်း၊ ဖဲပါစဉ်ဘမ်းပြီးလျှင်၊ ကြိုးထန်း၍စနက်သွယ်၊ ငါ့လက်  
 ဝယ်မထွေ၊ ပိုင်ရအောင်ခဲတော့မည်။

3. ရွှေပြည်မိုး ဝတ္ထုကိုဘတ်ခြင်းသည် မြန်မာလူမျိုးတို့၏ ထုံး  
 စံအထိုင်းနေထိုင်ပြောဆိုဝတ်စားခြင်းအကြောင်းကိုထိ ကြားနားလည်  
 ရန်အချေဖြစ်ကြောင်းဖော်ပြပါ။ 10

4. (က) အောက်ပါဝကျတို့တွင် “ဖြင့်” မပါအံ့အမိပ္ပာယ်ထူဝဘျ  
 လစ်ရေးပြပါ။— 10

(၁) သူတောင်းစားသည်တေးဆိုသဖြင့်ငွေရသည်။

(၂) မတုတ်သည်ငါးရောင်းခြင်းဖြင့်ငွေရှာသည်။

(၁) အောက်ပါဝကျတို့၌ စဉ် ဟူသောစကားသည် မည်  
 သည့်ကြိယာတို့ကိုမည်သည့်အနက်၌စပ်ကြသနည်း။—

(၁) မောင်မိုးသည် ကျောင်းသို့လာစဉ် မောင်မြနှင့်လမ်းမှာ  
 ထွေသည်။

(၂) ဘုရင်မင်းမြတ်သည်ငါးကိုတောင့်တနေစဉ်တံငါထယောက်  
 သည်ငါးကိုထမ်း၍ဝင်လာသည်။

5. အောက်ပါလင်္ကာစာပိုဒ်၏ အနက်အမိပ္ပာယ်ကိုရေးသား  
 ဖော်ပြပါ။

လှူပြည်မှာစန္ဒကူး၊ အထူးယေချမ်းကြည်၊ ထိုထက်ကယ်ပို  
 မိုက်လို့၊ လှူရဲလရောင်စန်း၊ ချမ်းပါထွသည်၊ သူတော်သူမြတ်တို့၊  
 မိန့်အပ်သည့်စကားရည်၊ လှူပြည်ဝယ်အံ့အံ့၊ လရောင်စန္ဒကူးထက်၊  
 အထူးပိုမိုလျှမ်းအောင်၊ ချမ်းမိန့်လှမြဲ။ ။

ချမ်းမြေ့ပြေစကား၊ ဆိုများသည့်သူမှာ၊ ခပ်သိမ်းမှုပြေလို့၊ လှူ  
 မြေမှာမိတ်ခပ်ပွန်း၊ ကျမ်းဖွဲ့များစွာ၊ ဝါစာဓရည်နှင့်၊ ကြမ်းကြုတ်ကယ်  
 ပြုသူမှာ၊ ဆွေသဟာရှိဘူး၊ သည်အရာ၊ လမင်းနေစကြာနှင့်၊ ပုံပမာ  
 ဆောင်ယူပြ၊ များသိကြဦး။ ။

ချိန်ခါသင့်မြတ်တွင်၊ မိန့်အပ်သည့်စကားရည်၊ တခွန်းပင်ဖြစ်  
သော်လည်း၊ ချစ်နှစ်ဘွယ်ပြန်မပြောင်း၊ ကောင်းရာခွဲတည်း၊ စာ  
လောင်ပူအပ်သည့်၊ လူငယ်တို့လွှာရည်မှာ၊ မကြည့်သည့်ထမင်း၊  
သိကြားနတ်စာသို့၊ မြတ်ရသာမည်ပြန်ဘိ၊ လောကီခေတ်တွင်း။ 15

6. အောက်ပါအကြောင်းအရာကိုစာစီကိုးရေးသားပါ။ 20

-မြန်မာပြည်၌လယ်ယာစိုက်ပျိုးခြင်းအကြောင်း။ -လယ်ယာ  
စိုက်ပျိုးခြင်းသည်ဆင်းရဲသားတို့၏အသက်မွေးမှု၊ ဖြစ်ခြင်း-လယ်  
ခွဲယာခွဲစိုက်ပျိုးသောအပင်အမျိုးမျိုး - ၎င်းတို့၏စိုက်ပျိုးသောဒေသ  
အရပ်၌နံ့နှင့်အချိန်အခါ - ၎င်းတို့အသီးအသီးစိုက်ပျိုးနည်းအထွေ  
ထွေ - စပါးစိုက်ပျိုးရာ၌မည်ကဲ့သို့အဆင့်ဆင့်ပြုပြင်လုပ်ကိုင်ရသည်  
အကြောင်း - စပါးစိုက်ပျိုးရာ၌ယခုထိုင်ရှေးနည်းယောင်းများ၊ မပြောင်း  
လဲသဖြင့်မည်ကဲ့သို့အကျိုးယုတ်လျော့ခြင်း - နည်းသစ်များအသုံးပြုလျှင်  
မည်ကဲ့သို့အကျိုးဖြစ်ထွန်းမည်အကြောင်း - ယခုအခါစပါးဈေးဆံ့ဈေး  
ယုတ်လျော့ခြင်းအကြောင်း - မြန်မာပြည်တွင်စပါးမှတစ်ပါးအခြား  
အရာဝတ္ထုတို့ကိုစိုက်ပျိုး၍အကျိုးကျေးဇူးရှိမည်အကြောင်း။ "

7. Translate into Burmese:—

In the morning, looking towards the seaside, the tide being low, <sup>15</sup>  
I saw something lie on the shore bigger than ordinary, and it looked  
like a cask. When I came to it, I found a small barrel, and two or  
three pieces of the wreck of the ship, which were driven on shore  
by the late hurricane; and looking towards the wreck itself, I thought  
it seemed to lie higher out of the water than it used to do. I examined  
the barrel, which was driven on shore, and soon found it was a barrel  
of gunpowder; but it had taken water, and the powder was caked  
as hard as a stone. However, I rolled it farther on shore for the  
present, and went on upon the sands as near as I could to the wreck  
of the ship to look for more.

## KANARESE

*Paper-setter & Examiner—MR. P. APPAJI RAU, B.Sc.*

*Candidates are required to give their answers in their own  
words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay in Kanarese on any ONE of the following <sup>20</sup>  
subjects:—

(a) 'Be normal in your speech and as normal as you can in  
behaviour. The world is amazingly full of kindly people.'

(b) We are in danger of being involved in universal poverty.

(c) Describe any outdoor game you like best. The game should be such that at least half a dozen players must be taking part on each side.

(d) ಭೋಜನವೂ, ದೇಶವೂ, ಸ್ವೀಚನವೂ, ಬಂಧುಜನವೂ ಪ್ರತಿಕೂಲವಾದರೆ ಪ್ರಾಜ್ಞನಾದವನು ಕಾರ್ಯಗೌರವದಿಂದ ಗರುಡಹಂಸಗಳೋಪಾದಿಯಲ್ಲಿ ಹಾರಿಹೋಗ ಬೇಕು.

2. Translate into Kanarese:--

15

Boys are very much the same all over India ; their needs are much the same ; parents send them to school for the same reasons in Calcutta as in Bombay, in Ootacamund as in Simla or Dehra Dūn. The Dehra Dūn school, even if it can devise its own curriculum, will be forced to do much the same work as any other school. It will have to teach Indian boys English, Sanskrit, mathematics, history, geography, science, and the vernaculars. That is just what all Indian schools do, with the exception in some provinces that science finds no serious place in the time-table because science teaching is expensive. Why call this a hybrid curriculum? The boy in an English school learns Latin, Greek, French, history, geography, science, mathematics. Is that any less hybrid? Boys in Indian schools are made to work for their matriculation. Boys in English schools are made to work for their school certificate.

3. Write the following in prose order and explain the underlying idea contained therein:—

15

ವಾತಸುತ ಕೇಳ್ ಲೋಕದಲಿ ವಿ |

ಖ್ಯಾತರೈವರು ತಂದೆಗಳು ವಡೆ |

ದಾತನೊಬ್ಬನು ಸ್ವಾಮಿಯೊಬ್ಬನು ಹೋದ ಜೀವನನು ||

ಆತು ಕೊಂಡವನೊಬ್ಬ ರಕ್ಷಿಸಿ |

ದಾತನೊಬ್ಬನು ಗುರುವದೊಬ್ಬನು |

ಮಾತದೇ ನುಳಿದುದರಿ ನೆನಗಗ್ರಜನು ನೀನೆಂದ ||

4. Write short sentences illustrating the use of the following:—

10

(a) ಮುಗಿಲಕಡಿಬಿದ್ದಂತೆ.

(b) ಗಂಧಮಾರುತ.

(c) ಕರಾಳಪ್ರಮುಖ.

(d) ಕರುಳಹೂದಂಡೆಗಳ.

(e) ನಿಶಾಚರಧೀರ.

(f) ಪೊಡವಿಯರಸೀತೆರದಿ.

5. Explain fully the statement:— 15  
*Slivitrí*—the ideal wife.
6. Name the best character in *Bhrátrí-prēma* and show why in your opinion it is supposed to be the best. 15
7. Write in about 250 words the story of *Suivale*. 10

## MODERN ARMENIAN

*Paper-setter & Examiner*—MR. M. J. SETH, M.R.A.S.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Modern Armenian:— 30  
 And, before I conclude, I must express my deep gratitude to the noble and chivalrous French nation for their great hospitality by giving shelter to thousands, nay tens of thousands, of helpless and hapless Armenian refugees and emigrants from Turkey and Anatolia who have found a safe asylum in France and in the French mandatory Arab state of Syria, where they enjoy freedom of thought and speech and the free and undisturbed exercise of their own religion, under the ægis of the tricolour, that glorious and inspiring emblem of liberty, fraternity, equality, chivalry, and culture. France has been the refuge and the safe haven of oppressed and persecuted Armenians for the last 650 years, for it may not be widely known, but it is nevertheless an historical fact, that the last Armenian king, Leo VI, died a refugee in Paris in A.D. 1393.

2. Compose short sentences in Modern Armenian to illustrate the use of the following words:— 20

**Տնտեսական, ազգայնական, կուսակցական, համայնա-  
 վար, մշակոյթ, ճարտարուեստ, ճարտարապետ, հնախոյզ,  
 հոգեբանութիւն, մտայնութիւն, կենսական, անհրաժեշտ,  
 ապիկար.**

3. Write an essay in Modern Armenian on any ONE of the following subjects:— 40

- (a) Ս'այրենի լեզուի հմտութեան անհրաժեշտութիւնը
- (b) Լեզգային Պատմութեան կարևորութիւնը:
- (c) Կրօնագիտութիւնը ազգային դպրոցներում:
- (d) Կուսակցականութեան փնտններն մեր մէջ:
- (e) Հրապարակագրութեան օգուտն լուսաւորութեան համար:

4. Write from memory the Armenian Creed:—

**Հաւատամք ի մի Դատուած —**



## MODERN TIBETAN

*Paper-setter & Examiner*—DR. SATKARI MOOKERJEE, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following passage into Modern Tibetan:— 40

A wonderful instance of juvenile love and heroism is furnished by the short story I tell here. There was a fire in the small village of Taralahi, a few miles from Darbhanga in Behar, in the day time on the 9th of April, 1918. A poor man's hut was ablaze. The man and his wife were both away from home; only a two-year-old baby lay sleeping in the cradle inside the hut, and his four-year-old brother was playing on the dusty village path at some distance. The child threw away his playthings and ran home. He saw from the small yard through the open door that his baby-brother was in the cradle crying, and perceived his imminent peril. He lost not a moment. Impelled by a love stronger than anything he could think of, he tripped in to the side of the cradle and pulled the baby down. Then, unable to take it up in his arms—it was too heavy for him—he dragged it out to the yard by its legs, while tongues of fire were shooting overhead and about him and the thin walls of bamboo twigs plastered over with clay were collapsing.

The baby was rescued; but his brother suffered from severe burns, which necessitated his removal to the government hospital at Darbhanga.

2. Give a brief summary of the conversation between Drimekunden and his mother and wife before his departure for the Devil's Hill. 12

3. Correct the errors in the following:— 6

བཀྲ་ཤི་འཁྱེད་པ་སྤྱད་པ་ལྟར་།

བཀྲ་ཤི་འཁྱེད་པ་སྤྱད་པ་ལྟར་།

4. Fill up the gaps in the following:— 6

གཞན་ལས་ཟུང་། ཟུང་། འདོད་།

བཟུང་བཅོས་། མེད་། བར་འདོད་།

5. Frame one sentence illustrating the use of the verb རྒྱུ་བ in the past tense and of the adjective དབང་ཅན་ 6

6. Write an essay in Modern Tibetan on any ONE of the following subjects:— 30

- The benefits of English education.
- The book you love most.
- The daily life of a Tibetan gentleman.

## LUSHAI

*Paper-setter & Examiner*—REV. DAVID EDWARD, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. I duh zawk zawk *essay* ziaak rawh :— 20
  - (a) *A Storm in the Hills* = Tlang ramah thlipui tieh.
  - (b) Mizo khua ah khawsak dân.
2. Heng thu lak chhuah zinga i duh duh panga chauh te chu hrilfiah la :  
khawihmunah nge, tuih nge tu hñehah nge sawi an nih, ti laṭṭ baw la :— 20
  - (a) 'Eng tihtheihnaiñ nge, tu hmingih nge hêng hi in tih ?'
  - (b) 'Ngai teh ! I pasal phumtute kephah chu kawngka bulah a lo awm ta, nang pawh an zawn chhuak ang che.'
  - (c) 'Lal Isua, ka thlarau la ang che.'
  - (d) I ṭawngtainate leh i thilpêk thute kha hriat reng turiñ Pathian hmaah a thleng chho ta a.'
  - (e) 'Makedonia ramah lo kai la, miñ pui rawh.'
  - (f) 'Grik ṭawng i hria elo ?'
  - (g) Hengho hi lawnga an awm reng loh chuan in him thoi lovaing.'
3. Kristiana thil hmuh leh hriat chanchin i duh zawk zawk la :— 10
  - (a) Hrilfiah tu In, (b) In Mawi.
4. (a) Sanhedrin hma ah Steffana thu sawi leh Agrippa hma ah Paula thu sawi teh khin la. 10

EMAW,

- (b) Paula zin wavi khatna ziaak la.
5. Heng mi chanchin i hriat ang angin ziaak la :—Rhodi, Anania leh Sapphiri, Tabithi, Barnaba, Damari, loh Apollova. 20
6. Zupui leh Satel thawnthu emaw Ran Thelnga Mi awm thawnthu emaw ziaak la. 10
7. He thu hman dân entir nân sentence tawi te siam la :— *chhuak chhuah ; lut, luk ; lei pa, leh sa.* 10

## ALTERNATIVE PAPER IN ENGLISH

*Paper-setter*—MR. HIRANKUMAR BANERJI, M.A., B.LITT.

*Examiner*—REV. C. E. ABRAHAM, M.A., B.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Relate in your own words the story told in ONE of the following poems :—(a) Whittier's *Kallundborg Church*, (b) Southey's *Bishop Hatto*. 18

2. *Either*, 'Gudurz turn'd and ran  
Back quickly through the camp in fear and joy.'

Give an account of the visit of Gudurz to the tent of Rustum and explain why he was afraid and full of joy. 18

*Or*,... 'Surely my heart cried out that it was thou,  
When first I saw thee.'

Describe Sohrab's conduct in the course of the combat with Rustum which proves the truth of these words.

How did Rustum receive his advances? 18

3. Explain THREE of the following extracts:— 24

- (a) I watch the sun fling gold away,  
And in my soul I lock it;  
And so am rich, though many a day  
I have an empty pocket.
- (b) 'He took the gallows for Himself,  
That, sure, belonged to me;  
He took the gallows, He took the thief,  
He stole my harvest sheaf by sheaf.'
- (c) A robin redbreast in a cage  
Puts all heaven in a rage;  
A dog starved at his master's gate  
Predicts the ruin of the State.
- (d) 'What is one more, one less, obscure or famed,  
Valiant or craven, young or old, to me?  
Are not they mortal, am not I myself?  
But who for men of naught would do great deeds?  
Come, thou shalt see how Rustum hoards his fame.'
- (e) As, at dawn,  
The shepherd from his mountain lodge describes  
A far bright city, smitten by the sun,  
Through many rolling clouds:—so Rustum saw  
His youth; saw Sohrab's mother, in her bloom;  
And that old king, her father, who loved well  
His wandering guest.

4. *Either*, Give an account of Hereward's adventures with the witches. 18

*Or*, How does Stevenson describe in his story the magic bottle and the power it brought to its possessor? Relate the circumstances in which Keawe desired to possess the bottle for the second time. 18

5. Explain two of the following extracts:— 16

(a) Robin Hood himself may have trolled out many a time, in doggerel strain, how Hereward played the potter.

(b) But now my terror was abated. I felt calmer, and I tried deliberately to be receptive; to make myself, as it were, an empty vessel into which might be poured the truth of that room.

(c) Remember, this is a true story. Life is not an adroit novelist who gathers up all the threads.

(d) I saw little children shedding the bondage of bitter circumstances. I saw waste turned to providence, the waste of unneeded humanity converted to the husbandry of unpeopled acres.

6. Write brief notes on THREE of the following:—Davy's locker, goat-legged Pan, janissaries, riding Odin's horse, Prester John, a Rhodes Scholarship. 6

# HISTORY-

*Paper-setter*—DR. UPENDRANATH GHOSH, M.A., PH.D.

*Head Examiner*—PROF. SURENDRANATH SEN, M.A., PH.D., B.LITT

MR. ABDUL WAHAB MAHMOOD, M.A.  
 „ ABUL FAZL MAHAMMAD SAYEED, M.A.  
 „ SAMBHUNATH BANERJEE, M.A.  
 „ ABANINATH BASU, M.A.  
 „ MOHINIMOHAN BISWAS, M.A.  
 „ SUDHINDRAKRISHNA DATTA, M.A.  
 „ NAZIR AHMAD, M.A.  
 „ NIRODEBANDHU SANYAL, M.A.  
 „ BIDHUBHUSHAN SENGUPTA, M.A. •

(To look over answer-papers written in Vernaculars).

## BENGALI

SRIMATI BHARAMAR GHOSH, M.A.  
 MR. SISHIKUMAR ACHARYA, M.A.  
 „ SUDHIRRANJAN GHOSH, M.A.  
 „ DINESCHANDRA SARKAR, M.A.  
 „ KARUNAKINKAR BANERJEE, B.A., B.T.  
 „ SADHANKUMAR BANERJEE, M.A.  
 „ BANWARILAL BASU, M.A.  
 „ MURALIDHAR BASU, M.A.  
 „ SUKUMAR BAHATTACHARYYA, M.A.  
 „ BIRENDRANATH CHAKRABARTI, M.A.  
 „ MAHENDRACHANDRA CHAKRABARTI, M.A., B.T.  
 „ HARIHAR CHATTERJEE, M.A.  
 „ CHARUCHANDRA DASGUPTA, M.A.  
 „ NIRMALENDU DASGUPTA, M.A.  
 „ SAMARENDRAKISOR DATTA, M.A.  
 „ RAMESCHANDRA MITRA, M.A.  
 „ PHANIBHUSHAN MOOKERJEE, B.A., B.T.  
 „ BIBHUDAN RAY, B.A., B.T.  
 KHAN SAHIB MUBARAK ALI, B.A., B.T.  
 MR. NEPALCHANDRA RAY, B.A.  
 „ NIHARRANJAN RAY, M.A.  
 „ NIRADBHUSHAN RAY, M.A.  
 „ TRIDIBNATH RAY, M.A.  
 „ BANKIMCHANDRA RAYCHAUDHURI, M.A.  
 „ ANNADACHARAN SEN, B.A.  
 „ PRABODHCHANDRA SEN, M.A.

*Examiners—*

## ASSAMESE

MR. SURYYAKUMAR BHUIYAN, M.A.

## TELUGU

DR. B. RAMCHANDRA RAU, M.A., PH.D.

## GUJARATHI

MR. HARGOVIND DAS SETH.

## MODERN ARMENIAN

MR. ZEBEDEE HANANIAN.

Examiners— (Contd.)	{	BURMESE
		MR. G. J. MUNRO.
		URIYA
		REV. BRAJANANDA DAS, B.A.
		HINDI
		MR. LALITMOHAN RAY, M.A.
		URDU
		MR. MAHAMMAD SHAFI, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*Candidates are permitted to answer SIX questions only, at least ONE being taken from EACH group. Each question carries 16 marks. FOUR marks are reserved for correctness of language.*

#### GROUP A

1. Describe the steps taken by Asoka for the spread of Buddhism. How did he secure the welfare of his subjects?
2. Sketch the reign of Harshabardhan.
3. Write short notes on any FOUR of the following:—(a) Porus, (b) Menander, (c) Narasimhavarmān Pallava, (d) Bhoja Paramara, (e) Vijay Sena, (f) Prithviraj Chauhan.

#### GROUP B

4. Give an account of the reign of Sher Shah.
5. Indicate the measures adopted by Akbar to extend and consolidate his dominion.
6. What success did Shivaji attain against the Delhi Empire? Give an account of his military system.

#### GROUP C

7. What was Dupleix's plan for extending French influence in India? Why did he fail?
8. What led to the Third Maratha War in the time of Lord Hastings? What were its important consequences?
9. Summarize the administration of Lord Ripon.

#### GROUP D

10. Describe the measures adopted by the British Government for the improvement of agriculture in India.
  11. Describe the constitution and functions of the Governor-General's Executive Council.
  12. 'Education may be described as England's mission in India—her highest aspiration.' Briefly describe the steps taken by her for the fulfilment of this mission.
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## GEOGRAPHY

*Paper-setter*—MR. SARATCHANDRA MAZUMDAR, M.A., F.R.C.S.

*Head Examiner*—MR. PANCHANAN SINHA, M.A.

<i>Examiners</i> — {	„ SASADHAR BANERJEE, B.A., B.ED.
	„ INDUBHUSHAN DE, B.A., B.T.
	„ REVATIRAMAN DE, B.Sc., B.T.
	„ JITENDRANATH MOOKERJEE, B.A., B.T.
	„ SURESHCHANDRA NIYOGI, B.A., B.T.
	„ KALIKRISHNA RAKSHIT, B.A., B.T.
	„ SANTOSHKUMAR RAY, M.Sc.
	„ NIBARANCHANDRA RAYCHAUDHURI, B.A., B.T.
	„ PRAPHULLAKUMAR SARKAR, M.A.
	„ KUMUDBANDHU SENGUPTA, M.ED.(LEEDS), DIP.ED.(LEEDS), B.T.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. How is the longitude at sea usually determined? At a certain place at noon the chronometer shows Greenwich time to be 6-15 p.m. What is the longitude of the place? 10
2. *Either*, What are the zones? How are the boundaries determined? Draw a diagram to illustrate your answer. 10  
*Or*, Compare the rainfall of Assam with that of Madras, and account for the difference, if any.
3. *Either*, Explain how deltas are formed. Why are the deltas formed by the rivers of India? 10  
*Or*, How are springs formed? What is an intermittent spring?
4. *Either*, What is a volcano? What is an earthquake? Are they allied phenomena? Give reasons for your answer. 10  
*Or*, Does the position of the Himalayas affect in any way the summer and winter climate of India? Give reasons for your answer.
5. *Either*, What are the most important mineral products of India? Where are they found and to what extent are they worked? 10  
*Or*, Mention the chief fibrous plants that are cultivated in India. State the places where they are grown and mention the countries to which they are exported.
6. Draw an outline map of India and insert the following:—  
(a) ONE area of heavy rainfall, (b) ONE area of deficient rainfall, (c) areas where tea and wheat are grown, (d) two important mountain ranges, (e) two important rivers, (f) two towns which have recently been damaged by earthquake. 10
7. In what industries do the Japanese excel? Where are they carried on? Name some of the chief seaports of Japan, and state where they are situated. 10
8. *Either*, Name THREE important manufacturing industries of the British Isles. Give reasons for their situation. From what countries do the British Isles obtain their food supplies? 10  
*Or*, Draw an outline map of France and insert (a) THREE rivers, (b) ONE mountain, (c) FIVE chief towns, and (d) ONE seaport.
9. Write short notes on:—Dividing Range, Sheffield, Dublin, Kalahari, Naini Tal, Ellora, Kolar, Congo, Brindisi, and Glasgow. 10
10. *Either*, Name the principal provinces of the Union of South Africa with their capitals. 10  
*Or*, What are the political divisions of the United States, and how are they governed?

## ELEMENTARY MECHANICS

*Paper-setter*—DR. JYOTIRMOY GHOSH, PH.D.

*Examiners*— { MR. GOPALCHANDRA BHATTACHARJI, M.A.  
 ,, KSHETRAMOHAN GHOSH, B.Sc.  
 SANTANUKUMAR MOOKERJI, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SEVEN questions.*

*Neatness will be taken into consideration in awarding marks.*

1. Define 'velocity' and 'acceleration'.

Find the downward velocity which must be given to a body that it may describe 450 feet in 5 seconds.

2. State (without proof) the 'parallelogram of velocities'.

A velocity  $V$  is the resultant of two equal velocities each making an angle of  $30^\circ$  with  $V$ . Find the magnitude of each of these equal velocities.

3. State Newton's second law of motion.

A mass of 10 lb., initially at rest on a smooth horizontal plane, is acted on by a uniform force for 5 seconds and acquires a velocity of 75 feet per second. Find the magnitude of the force.

4. Two weights of 5 lb. and 11 lb. are attached to the ends of a fine string which passes over a smooth pulley and the system is left free to move. Find the acceleration of the masses and the tension of the string.

5. A particle is projected upwards in vacuum with velocity  $V$ ; find (a) the time during which it travels upwards, and (b) the velocity when it is half-way up.

6. Define 'centre of gravity'.

Find the centre of gravity of a uniform lamina in the form of a parallelogram.

7. Describe any one kind of lever and find its mechanical advantage.

When two weights of 12 lb. and 4 lb. are suspended at the ends of a weightless lever, the fulcrum is 9 feet from the smaller weight. Find the position of the fulcrum when the weights are each increased by 2 lb.

8. State (without proof) the 'triangle of forces'.

Two forces acting in opposite directions to one another on a particle have a resultant of 10 lb., and if they acted at right-angles their resultant would be 50 lb. Find the two forces.

9. Describe, with a diagram, the system of pulleys in which each pulley is supported by a separate string, one end of which is attached to the fixed beam above and the other end to the next higher pulley.

Find the mechanical advantage for such a system.

10. The greatest resultant of two forces is 31 lb. and the least resultant is 17 lb.; what is the resultant when the two forces act at right-angles to one another?

## ELEMENTARY HYGIENE

*Paper-setter*—DR. SUSILKUMAR MOOKERJI, L.M.S., F.R.C.S. (EDIN.),  
D.D., D.O.M.S.

*Examiners*— { DR. RAMESHCHANDRA RAY, L.M.S.  
,, RADHAKRISHNA BANERJEE, M.B., D.P.H.  
,, ANATHNATH CHATTERJEE, M.B., B.S.  
,, AMALCHANDRA GANGULI, M.B., D.P.H., D.T.M.  
,, MRS. SUBARNA MITRA, M.B.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain what you understand by 'personal' and 'public' hygiene. 10

2. Describe the parts played by plants in the purification of air. Explain what you understand by natural and artificial means of purification of air. 15

3. *Either*, Mention briefly how tanks, wells, and rivers are polluted and how you can keep them free from such pollution. What is the cheapest and at the same time very efficient method of purification of water for drinking purposes? 20

*Or*, Mention the evil effects of 'impure or scanty supply of water. What do you understand by water-borne diseases? Name a few of them. 20

4. What is the composition of milk? In what way does it differ in cow's milk and human milk? In India milk is generally taken after boiling—is there any advantage in such a process? 15

5. *Either*, When were you last vaccinated and with what object? Describe the signs of a successful vaccination against small-pox. 20

*Or*, How are the following diseases caused:—(a) malaria, (b) cholera, (c) dengue, (d) elephantiasis, and (e) tuberculosis?

Can you mention any simple method of their prevention? 20

6. *Either*, Mention a few of the evil effects of the abuse of Indian hemp (*ganja*), tobacco, opium, and cocaine. 20

*Or*, Mention the main features of a healthy dwelling-house in a village of Bengal. 20

## COMMERCIAL GEOGRAPHY

*Paper-setter*—DR. MANMOHAN RAY, M.A., PH.D.

*Examiner*—DR. NALINAKSHA SANYAL, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only SIX questions are to be attempted, of which Question 9 must be one.*

1. What is the Mediterranean type of climate? In what parts of the world is this climate found? What are the chief products of this climate? 16



2. What are the advantages of a broken coast-line? Illustrate your answer by comparing the coast-lines of Africa and Europe. 16
3. Name the important countries of the world producing petroleum. What are the main uses of this product? What parts of the British Empire produce petroleum? 16
4. What are the chief steel producing countries of Europe? What are their principal markets? State very briefly what you know about steel manufacture in India. 16
5. What are the factors necessary for the growth of a seaport? Illustrate your reply by taking the cases of Hamburg, Madras, San Francisco, Rangoon, and Shanghai. 16
6. Describe the distribution of sources of power in India. Which of these are available in Bengal? 16
7. What are the principal exports from India? Which of these commodities can be retained in India for her own consumption? 16
8. You want to go from Calcutta to Delhi, from Delhi to Bombay, from Bombay to Madras, and then to come back to Calcutta. What principal railway lines would you use? 16
9. Draw a map of the eastern coast of India, locating on it Chittagong, Vizagapatam, and Madras. What are the principal exports from Vizagapatam? 20

## BUSINESS METHOD AND CORRESPONDENCE

*Paper-setter*—MR. NARENDRANATH SARKAR, M.A.

*Examiner*—MR. ARUNENDU DASGUPTA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt any TWO of the questions marked with an asterisk. and any FOUR of the others.*

1. The manager of a business house requires the services of a personal assistant. Amongst other qualifications, this assistant must possess some knowledge of Accountancy, Law, and secretarial work. He is also expected to have a fair amount of general education, and the possession of some suitable commercial diplomas would be an additional qualification. Previous experience, with copies of testimonials, is necessary. He must not be very old or very young. The manager has in mind a certain maximum salary which he does not want to exceed. Draft a complete form of advertisement inviting applications for the post. 18
2. A newspaper correspondent at Muzaffarpur wants to telegraph to the Calcutta Head Office a short description of the devastation caused at Muzaffarpur by the recent earthquake of 1934. Draft the telegram. 18
3. Give a complete ruling for a Bank Paying-in Slip. 18
4. What are the modern uses of a Journal? Can or should a modern business house do without it? Explain fully. 18

\*5. There are two different kinds of listing of the Telephone Directory in use in Calcutta. Name them and explain these two different kinds of arrangements. 4 14

6. Explain clearly the relative advantages and disadvantages of a Press Copy Book System and Carbon Copies System, with respect to out-going correspondence. 18

\*7. It is commonly said that an Insurance Policy cannot ensure life or property. Explain what it means and establish why, in spite of the undisputed truth of the above saying, Insurance Policies do serve a very useful purpose. 14

8. What is a Clearing Bank? What is an Exchange Bank? Explain their functions and name at least two Clearing Banks and two Exchange Banks working in Calcutta. 18

9. Explain the following commercial terms and abbreviations:— vendor, lessee, Director of a Company, stale cheque, F.O.B., royalty, Public Accountant, C.O.D., actuary, code telegram, import and export trade, good-will. 18

\*10. Distinguish carefully between Cumulative and Non-Cumulative Preference Shares. Do Preference Shares, *ipso facto*, rank preferentially for dividend at the time of liquidation? 14

11. Is registration of a partnership compulsory? Point out the disadvantages of non-registration. 18

\*12. Give a ruling for a Petty Cash Book on the Columnar System. There should be at least five entries illustrating the principal involved, and all the columns should be properly closed and ruled off. 14

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# Intermediate Examination,

1935

## ENGLISH

*Paper-setters*— { PROF. JNANRANJAN BANERJEA, M.A., B.L.  
MR. C. C. BISWAS, C.I.E., M.A., B.L., M.L.A.  
„ KUMUDBANDHU RAY, M.A.

### FIRST PAPER

*Head Examiner*—DR. MOHINIMOHAN BHATTACHARYYA, M.A., PH.D.

*Examiners*— { MISS STELLA BOSE, M.A.  
MR. PRAPHULLAKUMAR BANERJI, M.A.  
„ RAJKUMAR CHAKRABARTI, M.A.  
„ BANABIHARI DAS, M.A.  
„ PRAPHULLAKUMAR DAS, M.A.  
„ JITENDRANATH DASGUPTA, M.A.  
„ ACHYUTAKUMAR DATTA, M.A.  
„ PRAPHULLARANJAN DHAR, M.A.  
„ BIBHUTIBHUSHAN GHOSHAL, M.A.  
„ NRIPECHANDRA GUHA, M.A.  
„ BANIKANTA KAKATI, M.A.  
„ SOMNATH MAITRA, M.A.  
„ GIRIJAKANTA MAJUMDAR, M.A.  
„ DHIRENDRANATH MUKHERJEE, M.A.  
„ HARICHARAN MOOKERJEE, M.A.  
„ MANIKUMAR MOOKERJEE, M.A.  
„ NIRENDRANATH RAYCHAUDHURI, M.A.  
„ CHARUKUMAR SENGUPTA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

N.B.—*Candidates are to answer the questions in Group A, AND those EITHER in Group B OR in Group C.*

### GROUP A

1. *Either,* 20  
What thoughts passed through the mind of Siddharta when he made the Great Renunciation?

*Or,*

Briefly sketch the various personifications under which Keats describes the season of Autumn.

2. Answer one of the following:—

14

(a) Describe, after Johnson, the career of Wolsey, or 'Swedish Charles', as an instance of the vanity of human wishes.

- (b) Give the substance of the poem entitled *The Toys*, clearly pointing out the connection between the two parts.
- (c) 'Be Yarrow stream unseen, unknown!  
It must, or we shall rue it.'  
Why does the poet say so?

3. Explain, with reference to the context, *any two* of the following:— 16

- (a) You have the Pyrrhic dance as yet;  
Where is the Pyrrhic phalanx gone?
- (b) Our blood splashes upward, O gold-heaper,  
And your purple shows your path!  
But the child's sob in the silence curses deeper  
Than the strong man in his wrath.
- (c) From every room descends the painted face,  
That hung the bright Palladium of the place;  
And smoked in kitchens, or in auctions sold,  
To better features yields the frame of gold.
- (d) Help us to save free conscience from the paw  
Of hireling wolves, whose Gospel is their maw.

GROUP B

4. Answer *one* of the following:— 20
- (a) Do you think *Marmion* is entitled to be called 'the flower of English chivalry'?
- (b) Describe the Palmer's appearance. What part does he play in *Marmion*?
- (c) What ideas about medieval chivalric life do you get from Scott's poem?
5. Tell briefly in simple prose the Host's Tale, or Sir David Lindsay's Tale. 14
6. Explain *two* of the following, indicating the context in each case:— 16

- (a) O, what a tangled web we weave  
When first we practise to deceive!
- (b) The flash of that satiric rage,  
Which, bursting on the early stage,  
Branded the vices of the age,  
And broke the keys of Rome.
- (c) Himself, proud Henry's favourite peer,  
Held Romish thunders idle fear,  
Secure his pardon he might hold,  
For some slight mulct of penance-gold.
- (d) O for one hour of Wallace wight,  
Or well-skill'd Bruce, to rule the fight,  
And cry—'Saint Andrew and our right'!

GROUP C

4. Answer *one* of the following:— 20
- (a) By what processes of reasoning does Goldsmith arrive at the conclusion that an equal portion of blessings has been given to all countries?
- (b) Enumerate the 'charms' which endeared Auburn to the poet.

- (c) Ill fares the land, to hastening ills a prey,  
Where wealth accumulates and men decay.

Do you agree?

5. Reproduce briefly in your own words Goldsmith's reflections upon Switzerland, or his description of the village schoolmaster. 14

6. Explain *two* of the following, indicating the context in each case:— 16

- (a) The canvas glow'd, beyond e'en nature warm,  
The pregnant quarry teem'd with human form;  
Till, more unsteady than the southern gale,  
Commerce on other shores display'd her sail.
- (d) For just experience tells, in every soil,  
That those who think must govern those that toil;  
And all that Freedom's highest aims can reach  
Is but to lay proportion'd loads on each.
- (c) But times are altered; trade's unfeeling train  
Usurp the land and dispossess the swain.
- (d) And, as a bird each fond endearment tries  
To tempt its new-fledged offspring to the skies,  
He tried each art, reprov'd each dull delay,  
Allur'd, to brighter worlds, and led the way.

## SECOND PAPER

Head Examiner—DR. SRIKUMAR BANERJEE, M.A., PH.D.

Examiners—	{	MR. BENODEBEHARY BANERJEE, M.A.
		„ KIRTISCHANDRA BANERJEE, M.A.
		„ JYOTSNAMAY BASU, M.A.
		„ DWIJENDRANATH BHATTACHARYYA, M.A.
		„ DURGAPADA BISWAS, M.A.
		„ BHOLANATH CHAKRABARTI, M.A.
		„ SURENDRANATH CHAKRABARTI, M.A.
		„ DEBENDRANATH CHATTERJEE, M.A.
		„ JOGENDRAKUMAR CHAUDHURI, M.A., B.A.(OXON.).
		„ BIJAYRANJAN DASGUPTA, M.A.
		„ SUSILCHANDRA DATTA, M.A.
		„ SASIKUMAR GHOSH, M.A.
		„ AMULYARATAN GUPTA, M.A.
		„ SATYASARAN KAHALI, M.A.
		„ HRIDAYRANJAN LAHIRI, M.A.
		„ MOHINIMOHAN MOOKERJEE, M.A.
		„ TARAPADA MOOKERJEE, M.A.
	{	DR. SUBODHCHANDRA SENGUPTA, M.A., PH.D.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Either, (a) What appeals to you in the character of Yoshida-Torajiro? Wherein lay his patriotism? 14

Or, (b) What is Newman's explanation of the perpetual conflict between the North and the South which he speaks of?

2. *Either*, (a) Give an estimate of the life and character of George III. 14

*Or*, (b) Characterize Lamb's description of the Convalescent, dwelling specially on the quality of his humour.

3. *Either*, (a) Whom do you regard as the hero of the *Iliad*? Show how he fulfils the Homeric ideal of a hero. 14

*Or*, (b) Tell the story of *either* (i) how Agamemnon stirred up the wrath of Achilles, *or* (ii) how the two were finally reconciled.

4. *Either*, (a) Attempt a character-sketch of Pickwick. 14

*Or*, (b) 'The people in Pickwick, although consistently improbable, are never unnatural.' Criticize or justify this remark by reference to any ONE of the characters in the work.

5. Write notes on any ONE of the following:— 10

- (a) The Baptism of Jesus.
- (b) The Transfiguration of Jesus.
- (c) The Sermon on the Mount.
- (d) The Widow's Mite.

6. Explain any THREE of the following, stating the context in each case (selecting at least ONE passage from EACH of your text-books):— 27

(a) There is a kind of eloquence in that rap of Phocion's staff which is equal to anything Demosthenes ever said.

(b) That scheme of castle-building, in relation to which he confused so dangerously the world of dreams with the harder world of wages, capital, interest, and rent.

(c) O you fine gentlemen! you Marches, and Selwyns, and Chesterfields, how small you look by the side of these great men!

(d) The quarrel between Agamemnon and Achilles is tragedy: the domestic wrangles of the Thunderer and his queen are in the very spirit of low comedy.

(e) The gods of Homer are not the gods of Epicurus' creed who, as our English poet sings, 'lie beside their nectar, careless of mankind'.

(f) Who could continue to exist, where there are no cows but the cows on the chimney-pots; nothing redolent of Pan but pantiles; no crop but stone crop?

(g) Such are the narrow views of those philosophers who, content with examining the things that lie before them, look not to the truths which are hidden beyond.

(h) His lip might quiver and his cheek might blanch, but no expression of fear or concern escaped the lips of that immortal man.

7. Annotate any ONE of the following passages:— 7

(a) Think not that I am come to send peace on earth: I came not to send peace, but a sword.

(*Or*, Do not think that I came to send peace upon earth: I came not to send peace, but the sword.)

(b) The Kingdom of heaven is like unto leaven, which a woman took, and hid in three measures of meal, till the whole was leavened.

(*Or*, The kingdom of heaven is like to leaven which a woman took and hid in three measures of meal, until the whole was leavened.)

(c) Martha, Martha, thou art careful and troubled about many things: But on thing is needful: and Mary hath chosen that good part, which shall not be taken away from her.

(*Or*, Martha, Martha, thou art careful and art troubled about many things: But one thing is necessary. Mary hath chosen the best part, which shall not be taken away from her.)

## THIRD PAPER

Head Examiner—MR. RABINDRANARAYAN GHOSH, M.A.

Examiners—	{	MR. PRASANTAKUMAR BASU, M.A. (CAL.), B.A. (OXON.).
		„ ABU HENA, M.A.
		„ AFTAB IQBAL, M.A. (LOND.).
		„ BIBHUTIBHUSHAN BANERJEE, M.A.
		„ HRISHIKES BASU, M.A.
		„ BANKUBIHARI BHATTACHARYYA, M.A.
		„ GOPALCHANDRA BHATTACHARYYA, M.A.
		„ HARENDRENCHANDRA CHAKRABARTI, M.A.
		„ JATINDRANATH CHAKRABARTI, M.A.
		„ SASIMOHAN CHAKRABARTI, M.A.
		„ SAURINDRAKUMAR CHAUDHURI, M.A.
		„ JNANADAKANTA GANGULI, M.A.
		LIEUT. AJITKUMAR GHOSH, M.A.
		REV C. S. MILFORD, M.C., M.A. (OXON.).
		MR. NANIGOPAL MOOKERJEE, M.A.
		„ SURENDRANATH RAY, M.A.
		„ DEBENDRAKUMAR SEN, M.A.
	{	„ SHAHID SUHRAWARDY, B.A. (OXON.).

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Write an essay on ONE of the following subjects:—

40

(a) Right use of wealth.\*

(b) Self-reliance.

(c) Talent may be cultivated in retirement ; character is formed in the current of the world.

(d) Earthquakes.

2. Give in your own words the substance of ONE of the following extracts:—

20

(a) There is one instinct of our natures, which, if we follow wisely, cannot lead us too far astray. I say, if we follow *wisely*; because if we follow it unwisely, it means wrecked hopes, shattered lives, disappointed ambitions, crushed hearts and dishonoured graves. This instinct is our craving for happiness, the universal and unquenchable quest of our race. It is the one thing of which we are ever dreaming. The young look forward to this Land of Promise ; the middle-aged seek it frantically, although they begin to think it a desert mirage ; the old are privileged to look upon it only ere they die. How many enter into perfect happiness? Not many. They move forward to enter its shining gates, only to find a desert. The miner rushing over the snowy crevasses to Klondyke, the land of gold ; the emigrant leaving behind his happy home for speculative gains at Kimberley, the land of diamonds ; the young professional man at home, straining after a lucrative practice ; the shopkeeper, dreaming of leisure and a home of his own ; the statesman, striving for fame ; the orator, clamouring for applause—all these dream of happiness ; and to all it is as elusive or as visionary as the paradise of the eater of opium.

(b) Nothing shows better the progress of the culture of the mind than a simple comparative glance at higher education amongst ancient and modern nations. They both consider it as universal ; but what a difference in the universality of each ! With the ancients, education may be likened to a lake, the banks of which being limited are easily explored ;

with us it is like a shoreless ocean—the farther you explore it, the vaster it appears. Genius is no longer a beacon on the shore; it is a star, shining above the reefs, in the immensity of the skies; it no longer shows the port—the port no longer exists. It only shows the way through the rolling and stormy waves. Knowledge is infinite; man, who pursues it, dies in the midst of the immensity. What he explored is nothing, being easily measured. What remains to be discovered is unlimited. Nevertheless mankind goes on without rest. Some irresistible attraction carries it towards truth. It lives only in order to learn.

3. (a) Give clearly the sense of the following:—

20

I'm not concerned to know  
 What tomorrow Fate will do;  
 'Tis enough that I can say,  
 I've possessed myself today;  
 Then if happy midnight death  
 Seize my flesh, and stop by breath,  
 Yet tomorrow I shall be  
 Heir to the best part of me.  
 Glittering stones and golden things,  
 Wealth and honours that have wings,  
 Ever fluttering to be gone,  
 I could never call my own;  
 Riches that the world bestows,  
 She can take, and she can lose;  
 But the treasures that are mine  
 Lie afar beyond her line.  
 When I view my spacious soul,  
 And survey myself a whole,  
 And enjoy myself alone,  
 I'm a kingdom of my own.

- (b) Scan the FIRST EIGHT lines of the poem and name metre.

12

4. Define and give examples of any two of the following:—pleonasm, solecism, hyperbole, oxymoron, irony, pathetic fallacy.

8

## VERNACULARS

### BENGALI

*Paper-setter*—MR. SYAMAPRASAD MOOKERJEE, M.A., B.L.,

BARRISTER-AT-LAW, M.L.C.

*Head Examiner*—PROF. SUNITIKUMAR CHATTERJI, M.A., D.LIT.

SRIMATI LABANYALEKHA BANERJEE, B.A.

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		.. KALIPADA SEN, M.A.
		.. PRABODHCHANDRA SEN, M.A.
		.. SARATKUMAR SENGUPTA, M.A.
		.. HEMCHANDRA VIDYARATNA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Describe in your own words the idea of selfhelp contained in  
বদেগী সমাজ . 10

*Or*, Narrate briefly the excellence of the virtue of forgiveness as depicted  
in কুমার আদর্শ 10

2. Explain with reference to the context any two of the following  
extracts:— 12

(a) একদিকে পৃথগাসনে হোমাবশেষ-বিভূষিত অনিন্দ্যমূর্ত্তি ব্রাহ্মণমণ্ডলী  
সভাপণ্ডিতকে পবিত্রবেষ্টন করিয়া বসিয়াছেন। যে আসনে একদিন হলাম্বুধ  
উপবেশন করিয়াছিলেন, সে আসনে এক্ষণে এক অপরিণামদর্শী চাটুকার  
অধিষ্ঠান করিতেছিলেন।

(b) দূর হইতে দৈলংঘ্যারার অধিপতি এই ব্যাপার দেখিলেন;  
মুহূর্ত্তের জন্ত ইষ্টদেবতা স্মরণ করিলেন, পরে আপনার বালাবংশীয় যোদ্ধা লইয়া  
সম্মুখে ধাবমান হইলেন। মেওয়ারের কেতন স্বর্ণ-স্বর্ধ্য একজন সৈনিকের  
হস্ত হইতে আপনি লইলেন এবং মহাকোলাহলে সেই কেতন লইয়া বালাকুলের  
সহিত অগ্রসর হইলেন।

(c) দেশে যে অত্যাচার-অবিচার ছিল না তাহা নহে; বরং অনেক  
সময়েই দেশে ভয়ানক অরাজকতা উপস্থিত হইত। কিন্তু সে অরাজকতায়  
জমিদার ও মহাজন যতই উৎপীড়িত হউন না কেন, কৃষক-কুটীরে তাহার  
ছায়াস্পর্শ হইত না। কৃষক যথাকালে হল চালনা করিয়া, যথা-প্রাপ্য শস্য  
সঞ্চয় করিয়া, জীপ্ত লইয়া যথাসম্ভব নিরুদ্বেগেই কালযাপন করিত।

(d) দুঃখ আমাদিগকে যত পীড়িত, ব্যথিত ও অভিভূত করে, সুখ  
তেমন আনন্দ দান করিতে পারে না। সুখের মাদকতা অপেক্ষা দুঃখের  
তীব্রতা আমরা সমধিক অমুভব করিয়া থাকি। সেই জন্ত এক দিনের, এমন কি  
এক দণ্ডের দুঃখ সারাজীবনের হাসিরাশিকে স্নান ও অকিঞ্চিৎকর করিয়া  
দিতে পারে।

3. Explain fully any TWO of the following passages :—

12

(a) গমন মন্থর গতি                      জিনি মদমত্ত হাতী  
ভাবাবেশে ঢুলি' ঢুলি' যায় ।  
অরুণ-বসনী ছবি                      জিনি' প্রভাতের রবি  
গোরা-অঙ্গে লহরী খেলায় ।

(b) কোটা খুলি' রক্ষাবধু যত্নে দিল ফোঁটা  
সীমন্তে ; সিন্দূর-বিন্দু শোভিল ললাটে,  
গোধূলি-ললাটে, আহা ! তারা-রক্ত যথা ।  
দিয়া ফোঁটা, পদ-ধূলি লইলা সরমা ।

(c) ওরে শাউন মেঘের ছায়া পড়ে  
কালো তমাল-মূলে  
ওরে এ-পার ও-পার আঁধার হ'ল  
কালিন্দীর কূলে ।  
ঘাটে গোপাঙ্গনা ডরে  
কাঁপে থেয়া তরীর 'পরে,  
হের কুঞ্জবনে নাচে ময়ূর  
কলাপখানি তলে ।

(d) নাই কিরে স্মৃতি ? নাই কিরে স্মৃতি ?  
এ ধরা কি শুধু বিষাদময় ?  
যাতনে জলিয়া কাঁদিয়া মরিতে  
কেবলই কি নর জনম লয় ?  
কাঁদাতেই শুধু বিশ্ব-রচয়িতা  
সৃজন কি করে এমন করে ?

4. Quote from memory the FIRST SIX lines of either Rabindranath Tagore's ভারতলক্ষ্মী or Michael Madhusudan Dutt's বঙ্গভাষা or Atul prasad Sen's মেঘের দল ।

6

5. (a) Re-write in elegant Bengali :—

5

সেবার মাহেশে রথ দেখতে গিয়ে এমন ফ্যাসাদে পড়া গিছলো যে সে  
আর কহতব্য নয় । এক বাবু তাঁর তিন ইয়ার নিয়ে মোদের নায়ে চড়লেন ;

আর নাওখানি সেই মোটা মোটা বাবুদের ভীষণ চাপে ডুবতে রয়ে গেল।  
তাই না দেখে সেই ভক্তবেশী বাবুর দল হি হি করে হাসতে শুরু করে দিলেন।

(b) Expound the *samāsas* in the following words :—

5

মনোরথ, অভূতপূর্ব, অলঙ্ঘ্য, মতিচ্ছন্ন, আনাড়ী।

6. Amplify the idea contained in the following lines :—

15

তোমার কাছে আরাম চেয়ে

পেলেম শুধু লজ্জা।

এবার সকল অঙ্গ ছেয়ে

পরাণ রণ সজ্জা।

ব্যাঘাত আত্মক নব নব

আঘাত থেয়ে অচল রবো,

বকে আমার দুঃখে, তব

রাজ্বে জয়ডক।

দেবো সকল শক্তি, লবো

অভয় তব শত্রু ॥

7. Translate into Bengali :—

15

It is impossible for any man to be a student without endangering the health. Man was made to be active. The hunter, who roams through the forest, or climbs the rocks of the Alps, is the man who is hardy, and in the most perfect health. The sailor, who has been rocked by a thousand storms, and who labours day and night, is a hardy man. Any man of active habits is likely to enjoy good health, if he does not too frequently overexert himself. But the student's habits are all unnatural; and by them nature is continually restrained. There can be no room for doubt, that one cause why so many of our promising young men sink into a premature grave, is that they try to do so much in so short a time.

8. Write an essay on any ONE of the following :—

20

(a) Where Love is, there God is.

(b) The wealth of India lies in agriculture—improvement of agriculture—consequent improvement of village life.

(c) Indian earthquake of January, 1934, and the measures adopted for giving relief to the sufferers.

## HINDI

*Paper-setter*—RAI GOBINLAL BANERJEE, BAHADUR, B.A., Kabiratna

*Examiners*— { PANDIT BABUA MISRA JYOTISHACHARYA  
MR. LALITAPRASAD SUKUL, M.A. •

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain fully *either* in Hindi *or* in English, with reference to the context, any ONE extract from each of the following groups:— 24

## GROUP A

- (a) चन्द्रवंश की प्रथम कलह चंकुर यहि मानो ।  
जाके चित सौजन्य भाव नहिं नेकु लखानो ॥  
विष जल अगिन अनेक भांति हमको दुख दीनी ।  
सो यह आवत ठीठ लखो कुरुपति मतिहीनी ॥

- (b) मुनि-पद-कमल नाइ करि सीसा ।  
चले बनहिं सुर-नर-मुनि-ईसा ॥  
आगे राम अनुज पुनि पाछे ।  
मुनि-वर-वेष बने अति आछे ॥  
उभय बीच सिय सोहर कैसी ।  
ब्रह्म जीव बिच माया जेसी ॥

## GROUP B

a) हिन्दूधर्म में सब समय में जगत के कल्याणार्थ पूर्णब्रह्म सच्चिदानन्द का ही, और वह भी पूर्णकला से ही, अवतार होना नहीं कहा जाता। अनेक अवतार अंशकला और विशेष विशेष शक्तियों से माने जाते हैं और सब के द्वारा निर्दिष्ट कार्य सिद्ध होता गया है।

(b) जब तक आप की प्रेम-भक्ति के पवित्र अस्तुविन्दु इस सत्य वस्तु के चरणों पर भेंट न किये जाएं, जब तक आप की योग-तपस्या का लक्ष्य इस सुप्रकट सत्य की ओर स्थापित न हो, तब तक समझियेगा कि आप का कर्म-व्यापार तथा पूजा-होम-आदि इस प्रत्यक्ष सत्य पर अर्पित नहीं हुआ।

## GROUP C

- (a) जिन की धन निज कुल अभिमाना ।  
तिन तन भंगूर अस धिर माना ॥

बिजु समान जानि प्रिय बचल ।

गनत नाहिं सी ताहि सुख फल ॥

- (b) सुतगन की अवतार पिताही की अनुमानो ।  
 नहीं भिन्न दिन गुनौ ब्राह्म रुचति यह जानौ ॥  
 दानी धरनी कीर सुवन भाऊ जहिं पायो ।  
 सी कैसे वृत भयो भूप कतहाल भीझायो ॥

2. State briefly in Hindi the arguments in support of travelling in foreign countries by the Hindus as put forward by the author of *Satyārtha Prakāśh* in your text. 7

3. Give the different significations of की in the first line of the extract (b) of Group C in Question 1, and also show by examples the other uses of this case-ending in Hindi. 6

4. Illustrate by typical examples the various uses and significations of repetition of words in Hindi. 7

5. Amplify any ONE of the following in simple Hindi :— 15

(a) विद्या धन उदयम बिना कहौ नु पावेकौन ।

• बिना डुलाय न मिलै ज्यों पंखा की पौन ॥

(b) सबै सहायक सबल के कीउ न निबल सहाय ।

पवन जगावत आग की दीपहिं दैत बुझाय ॥

6. Construct short sentences illustrating the use of any FOUR of the following phrases :—हां में हां मिलाना ; आंख चुराना ; राह देखना ; हाथ मलना ; हाथी जलना ; and कर बैठना । 6

7. Translate either (a) or (b) into Hindi :— 15

(a) In the Gurukula all children, whether rich or poor, were treated on a footing of equality. They lived as the sons of the same father. The king's son and the peasant's son were equal in it. One could not enjoy a luxury that was denied to the other. All differences were levelled, and the only rivalry permitted was the rivalry of intellect, industry, service, physical strength, and moral character. The feeling of fellowship and brotherhood here acquired persisted throughout life. The rich later did not feel conceited because of their wealth, nor did the poor feel ashamed of their poverty.

(b) Babar was the first of the Mughal emperors under whom India rose to the highest pitch of prosperity. His life was full of activities, both physical and intellectual. He was an astonishing hero, and was one of the most accomplished of the Eastern princes, being a poet, historian, and musician of no ordinary merit ; easy of access to his subjects, and fond of social enjoyments. He was so great an admirer of the beauties of nature, that in the days of his adversity, when closely pursued by his enemies, he would pause in the midst of his flight to gaze on a beautiful landscape or a simple flower.

8. Write an essay of about *fifteen* lines one *one* only of the following:— 20

(a) भूमिकल्प—इसका कारण, इससे बिहार प्रदेश को दुर्दशा, प्रजावर्ग के साहाय्य के लिए क्या प्रबन्ध किया जाता है।

(b) विमानपोत—इसका आविष्कार, इसकी उपयोगिता, इसका व्यवहार, इसमें श्रमण करने में कौसी विपत्त को सम्भावना।

## URDŪ

*Paper-setter*—MAULVI A. F. M. ABDUL KADIR, M.A.

*Examiner*—MAULVI M. MAHFUZ-UL HAQ, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Give a brief sketch of the life of the author of *Firdaus-i-Barin*, commenting on his style as a writer of Urdū prose. 8

2. Give the substance of the dialogue, in Urdū, between Husafn and Shaikh 'Alī Wujūdī after the murder of Imām Najm-ud-Dīn of Nishāpūr. 8

3. *Either*, Re-writes the following lines in simple Urdū :— 8

ناگہاں ایک لاجوردی منقش پردہ جو پہلے دیوار کا دھوکا دے رہا تھا کھنچ کے نظر سے غائب ہو گیا اور ایک معمور مگر قوی الجثہ اور نہایت ہی نورانی صورت کا آدمی نظر آیا جو زرتار مسند پر گلو تکیے سے لگا ہوا عجب بی پروائی و بی نیازی کی شان سے بیٹھا تھا۔ اُسکا نورانی چہرہ آئینہ کی طرح صاف تھا۔ اور اس وقت چاروں طرف سے شمعوں اور نیز در و دیوار کے شیشوں کی ضرپڑنے سے آفتاب کے مثل چمک رہا تھا \*

Or, Discuss the title of the book فردوسِ بریں

4. Who were the Malāhida? Relate fully what you know about them and describe how their movement was finally suppressed. 10

5. Explain, in simple Urdū, *one* only of the following extracts :— 7

(a)

طاثر کے یہ سن کلام صیاد \* بس دامنوں ہوا غلام صیاد  
بازر کے جو بند کھول دالے \* طاثر کے ترپکے پر نکالے

اک شاخ پہ جا چہکے بولا \* کیوں پر مرزا کیا سمجھکے کھولا  
 ہمت نے مری مجھے اُڑایا \* غفلت نے تری مجھے چھڑایا  
 دولت نہ نصیب میں تھی تیرے \* تھا لعل نہاں شکم میں میرے  
 دے کر صیاد نے دلاسا \* چاہا پھر کچھ لگائے لاسا  
 (b)

ساقی قدح شراب دے دے \* مہتاب میں آفتاب دے دے  
 ساقی باقی جو کچھ ہولے لے \* باقی ساقی شراب دے دے  
 اس بت سے نہیں سوال کچھ اور \* اپنے منہ سے جواب دے دے  
 لیلیٰ میں نے تجھے بنایا \* معجون مجھ کو خطاب دے دے  
 اس کل سے سیم زر نہیں مانگ \* جو چاہے وہ بی حساب دے دے

6. Use the following idioms in short sentences, indicating their correct application :— 12

آرے ہانہوں لینا - آرے آنا - آسمان توت پڑنا - اُس توتنا - آگ  
 ہونا - اڑیاں رگڑنا

7. Paraphrase the following lines in simple Urdū :— 12

آنکھوں میں نور تیرا دل میں سرور تیرا  
 دروازے سے ہے کھر تک سارا ظہر تیرا  
 تو مہر تیرے آگے سب قطرہائے شبنم  
 انکا کہاں تھکاں جب ہو ظہر تیرا  
 اے چشم شوق وہ تو ہر رنگ میں ہے ظاہر  
 اب بھی جو تو نہ دیکھے تو ہے قصور تیرا  
 میں آئینہ ہوں تیرا تو آئینہ ہے میرا  
 تجھ میں ظہر میرا مجھ میں ظہر تیرا  
 مدھوش عشق ہو کر جا بزم معرفت میں  
 پردہ نہ بیچ میں ہو غافل شعور تیرا

8. Translate the following lines into simple and idiomatic Urdū :— 15

In Muhammadan society the merchant enjoys a respect and consideration that is connected with the origin of his faith; for Muhammad the

prophet, the founder of Islam, had been himself a merchant, and thus conferred upon the profession of the trader an elevation and a dignity which has gained for him an entrance into the highest society. . . . Consequently, trade has never implied any disparagement in Muslim eyes, for are not the market-places the table of God and whosoever comes to them partakers thereof?

9. Write an essay in Urdū on *one* of the following subjects :— 20

(a) باغ جہاں میں کوئی روشنی نہیں  
دروازوں گل پہ ہاتھ تو کھٹکا ہے خار کا

(b) سانس کی طرح چلیے منزل ہستی میں بشر  
مدعا یہ ہے کہ دم بھر کوئی بیکار نہ ہو

(c) The advantages of a knowledge of the English language in the modern age.

## ASSAMESE.

*Paper-setter*—MR. SURYYAKUMAR BHUIYAN, M.A.

*Examiners*— { MR. AMBIKANATH BORAH, M.A.  
PANDIT GAURIDATTA MISRA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Assamese *one* of the following passages:— 15

(a) Assamese is the language usually spoken by the entire population of the Brahmaputra Valley, and in most cases it is the only medium of intercourse with the bordering hill tribes. There is nothing to show that the Assamese race and their language have not existed in this valley from time immemorial; and it is surprising that, during the change of rulers, the oppression and misrule to which they have been subjected, there are so few traces of any material change in their language. The Ahoms conquered Assam at an early period and governed it for many hundred years until it passed into the hands of the present Government; but scarcely a trace of their language is found in the present dialect of the Assamese. The Burmese, the Mohammedans, and powerful Cachari Tribes have in turn waged war upon Assam without affecting the language.

(b) This book is intended to be picture of all mankind of to-day, a picture of living mankind, active, working, spending, making, and destroying. There are, we are told, one thousand nine hundred million human beings more or less. They all breathe, eat, and sleep, and they are otherwise engaged in the most various activities. They co-operate with one another and they are in conflict with one another. They die but continually more are born to take up and extend the activities the dead have relinquished.

2. Write the substance of the poem "অকৃত্তি" or "স্মরণ"



3. Explain, with reference to the context, *any one* of the following :— 3

(a) তুমি ভাল বিশ্ব ভালে সবাতো হৃন্দব,  
বিকুটালে মুখ কিন্তু বিকট বদন ।

(b) আদৰ মালতী তব মৰমৰ চিন  
তুলি থলো হৃদয়ত জীওঁ যত দিন ।

4. State briefly the part played by চিত্ৰলেখা in *Kumarharan*. 5

Or,

Describe the journey of চিত্ৰলেখা from শোণিতপুৰ to ঘাৰকা

5. Explain, with reference to the context, *any one* of the following:— 3

(a) ফোট মলচিয়া তাই নিজৰূপ ধৰি ।  
নাৰদৰ চৰণত নমস্কাৰ কৰি ॥  
তোমাৰ প্ৰসাদে গুৰু সাধো সবে কাজ,  
নিৰ্ভয়ে চলোহো গোবিন্দৰ নিজ বাজ ॥

(b) অবিদিতে বিহা ভৈল উষায়ে সহিত ।  
জানি বাণ বাজা বন্দী কৰিলা তহিত ॥  
সুখ্যৰ প্ৰসাদে নোৱাৰিলে মাৰিবাক ।  
হেন জানি আপুনি যায়েক বাখিবাক ॥

6. *Either*, 10

সামাজিক ভাৱৰ প্ৰভাৱ যেনেকৈ ব্যক্তিগত ভাৱৰ ওপৰত আছে তেনেকৈ  
ব্যক্তিগত ভাৱৰো সামাজিক ভাৱৰ ওপৰত আছে ।

Discuss the above statement, and show how the two sentiments react on each other.

Or,

What are the impediments in the way of international fellowship and good will?

7. Write a short history of the বোৱামৰীয়া বিদ্ৰোহ as you can gather from Horkanta Boruah's *Assam Buranjee*. 10

Or, •

Write what you know of the following:—

লতাকটাৰণ, বৰবজ্জাফুলেশ্বৰী, বন্দৰ বৰফুকন, ভূতৰ পুতেক সৎবাম ।

8. Explain with reference to the context :— 4

পাছে স্বৰ্গদেৱে ভিতৰতে চোমদেও ও লক্ষ্মীনাৰায়ণ দুয়ো দেৱতা হল দেখি  
বাক্তত বৰচুৱাৰ ভিতৰতে দেৱালয় পতাদৰে ঘৰ কৰি চোমদেৱক বাক্তলৈ নি

পৰে-পালীয়ে থাকিবলৈ ডাঙৰীয়া সকলৰ লৰা-লুৰিকে অৰ্থাৎ গোহক্ৰি চোটিয়া দিলে।

9. Give the substance in Assamese of the following :—

15

অসম দেশত বৰ্ত্তমান বিবাদৰ উষাই ভূমুকি মৰাৰ চিনবিলাক দেখা পাই আজিৰ প্ৰবন্ধত তাকে এটি এটিক অসমীয়া শিক্ষিত সকলক আঙুলিয়াই দেখাবলৈ আগ বাঢ়িলো। প্ৰথম চিন—কোনো এটি জাতিৰ ইয়াতকৈ একো অৱনতি হ'ব নোৱাৰে, যদি তাৰ মানুহবিলাক ক্ৰমে দুৰ্বল নিশকটীয়া হৈ পৰে। যি জাতিৰ মানুহবিলাক দুৰ্বল হৈ পৰে, সেই জাতিৰ ক্ৰমে ক্ৰমে সঁচ লোপ পায় তাৰ অকনো তুলনাই। আৰু শৰীৰৰ বলৰ লগত হে সাহসৰ সম্বন্ধ, তাক অতি মুৰ্খও নহ'ব বুলিব নোৱাৰে। শৰীৰৰ বল টুটা হলে যেনে কোনো জাতিৰ সাহসিত কমে, তেনে দৰে মনৰ সাহ কমিলেও তাৰ লাহে লাহে শৰীৰৰ বল কমে। এই দুইটি কমাৰ ভিতৰত ইটিৰ লগত সিটিৰ সমবায় সমসূত্ৰ সম্বন্ধ, কিয়নো শৰীৰৰ লগত মনৰ ধৰাবন্ধা লগ।

Or,

Amplify the idea contained in one of the following passages:—

(a) টেঙা আম এবাৰহে বেচিব পাৰি।

(b) কৰ্পপথে ভকতৰ হিয়াত প্ৰবেশি হৰি  
দুৰ্বাসনা হৰা সমস্তয়।

জলৰ যতেক মল ষেহেন শবত কালে  
স্বভাৱতে নিৰ্মল কৰয় ॥

10. Frame sentences, illustrating the meaning of the following expressions:—

10

পেটমছা, হাতলৰ, চকুচৰহা, মৰম নেস্তা, আন্তকাণ।

Give the adjective forms of পাম, পেট, দাঁত; noun forms of থা, লিখ।

11. Write an essay on one of the following subjects:—

20

(a) বৰ্ত্তমান অসমীয়া সাহিত্য।

(b) আসামৰ বেপাৰ বনিজ আৰু তাত অসমীয়াৰ ভাগ।

(c) চৰিত্ৰ বল।

(d) “ভুক্তো কলটো নপকে”।

## MAITHILI

*Paper-setter*—KUMAR GANGANANDA SINHA, M.A.

*Examiner*—PANDIT DEBANANDA JHA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. In handling the mythological story of Krishna's childhood, Manbodh was by no means indifferent to the life around him.—Discuss with reference to your text.— 15

*Or,*

Write a note on the diction of Manbodh as illustrated in his Krishna Janma. Illustrate your answer by reference to your text. 15

2. Examine critically the plot construction of Sundar-sanyog-nāṭaka of Jivan Jha. 10

*Or,*

State how Jivan Jha has characterized सुन्दर or सरला in his 'Sundar-sanyog'. 10

3. Give in Maithili an account of the birth of Gaṇesh. 7

4. Explain with reference to the context:— 8

विपत अपत तरु पाओल रे	पुन नव नव पात ।
विरहिन-नयन बिहल बिह रे	अबिरल बरिसात ॥
सखि अन्तर विरहानल रे	नित बाढ़ल जाय ।
बिनु हरि लख उपचारहु रे	हिय दुख न भेटाय ॥
पिय पिय रटय पपिहरा रे	हिय दुख उपजाव ।
कुदिना हित जन अनहित रे	थिक जगत सोभाव ॥
कवि विद्यापति गाओल रे	दुख भेटत तोर ।
हरखित चित तौहि भेटत रे	पिय नन्दकिशोर ॥

5. Amplify in Maithili:— 15

सिंहक सदन समीपमें, गज-मुक्ता परिपूर ।  
भेटय गिदरक भवन लग, बकरिक नाऊड़ि खूर ॥

6. Translate into Maithili:— 15

Akbar was born in the desert when his father was fleeing from his kingdom and was seeking in vain a resting place where he could shelter himself and his family. When merely an infant, his parents had to leave him at the mercy of an uncle whose attitude towards Humayun and his family was always characterized by bitter hatred and gross treachery. Even when he was restored to his parents he had to pass his life in camps.

7. Construct sentences in Maithili to illustrate the use of *all* the *kāṛakas*. 10

8. Write an essay in Maithili on ONE of the following subjects:— 20

(a) Travelling: general remarks, its pleasure and utility, different modes of travelling—their respective pleasures and inconveniences.

(b) Novel-reading—a recreation—improves our knowledge of language—conveys useful information—but many read simply to kill time—within proper limits not to be objected to, but should not be allowed to interfere with study of serious subjects.

## MARATHI

*Paper-setter*—PROF. D. R. BHANDARKAR, M.A., PH.D.

*Examiner*—MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay in Marāṭhi on *either* of the following :— 20

(a) How you may best help the poor.

(b) Good and evil influences of the cinema.

2. Translate into Marāṭhi the following :— 15

After eulogizing Rāma's high qualifications and amiable character, the great saint with much emotion explained: 'The king has prepared for a royal installation, and wishes to confer upon you the dignity of regent. To-day, Rāma, you should devote yourself to practices of devotion, that God may bring the matter to a happy issue.' Having thus admonished him, the *guru* returned to the king; while Rāma's heart was all amazement. 'My brothers and I were all born together, and together have we eaten and slept and played in childhood; the piercing of our ears, the investiture with the sacred thread, our marriage, in short all our rejoicings, have taken place together. This is the one flaw in a spotless line that the eldest only should be enthroned without his younger brothers.' These gracious regrets on the part of the lord remove all unworthy suspicion from the mind of his votaries.

3. What is the end and object of the *Prem ki Laukik* by G. C. Bhate? 10

4. Show what position the *Ushaḥkūla* occupies in the history of novel-writing in Marāṭhi. 10

5. Which parts of N. C. Kelkār's *Gadyaguchchha* do you like best, and why? 10

6. Explain the following in Marāṭhi :— 20

(a) झीन माझी याति । बरी स्तुति कैली संली ॥

अंगी बसूं पाई गर्व । माझे हरावया सर्व ॥

मी एक जाणता । ऐसं वाटसं चिन्ता ॥

राख राख गेलों बाया । तुका नव्हे पंढरी-राया ॥

- (b) ठेवा जाणौव गुंडून । एथें भावचो प्रमाण ॥  
 एका अनुसरल्या काज । अबधें जाणे मुंडरी-राज ॥  
 दीर्घे, तर्कावितर्कासी । बाव न लगे सायासासी ॥  
 तुका म्हणे भावावीण । अबघा बोलती तो ग्रीण ॥
- (c) तनू त्यागितां कीर्ति मागें उरीवी ।  
 मना सज्जना हेचि क्रीया धरावी ॥  
 मना चंदनाचे परी त्वां फिजावें ।  
 'परी' अ'तरीं सज्जना नीववावें ॥
- (d) मना पाहतां सत्य हे मृत्यु-भूमौ ।  
 जितां बोलती सर्वही जीव मी मी ॥  
 चिरजीव हे सर्वही मानिताती ।  
 अकस्मात सीडीनियां सर्व जाती ॥

7. Amplify the following in Marāṭhī :—

15

देव भक्तालागी कळ' नेदी संसार ।  
 अ'गे' वारावार कळनि ठेवी ॥  
 भाग्य द्यावें तरी अ'गीं भरे ताठा ।  
 म्हणूनी करंटा करुनि ठेवी ॥  
 स्त्री द्यावी गुणवती नसती गुंते आशा ।  
 यालागीं कर्कशा पाठी लाबो ॥  
 तुका म्हणे मज प्रचित आली देखा ।  
 आणौक या लोकां काय सांगूं ॥

## KHASI

*Paper-setter*—MR. ROY ROWLAND THOMAS, M.A.

*Examiner*—RAI BAHADUR DOHORY ROPMAY, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Khasi :—

For these reasons there are not more useful members in a common-wealth than merchants. They knit mankind together into a mutual inter-

15

course of good offices, distribute the gifts of nature, find work for the poor, add wealth for the rich, and magnificence for the great. Our English merchant converts the tin of his own country into gold, and exchanges his wool for rubies. The Mahomedans are clothed in our British manufacture and the inhabitants of the frozen zone warmed with the fleeces of our sheep.

2. Compose a story in Khasi illustrating the maxim *either*, that 'the paths of glory lead but to the grave', *or*, that 'virtue is the crown of life'. 10

3. Write an essay in Khasi on ONE of the following subjects:— 20

(a) Ka kam kaba kongsan eh hapteng ki Khasi.

(b) Ka jingrapher ki Khasi na u Phareng' bad u Dkhar.

(c) Ka jingdonkam ban pyrkhat bha shwa ban trei.

(d) Da kino ki jingtrei ba ki Khasi kiba la nang la stad ki lah ban im.

4. Kumno la pynroi ia ki jingthala ha ki briew kat kum U Eklesiastis ha ka lynnong kaba IV. 15

5. Explain with reference to the context:— 15

*Either*, "Baroh hynriew kim dep tang ha pyrthei."

*Or*, "Kine baroh hynriew tylli ki kpait."

6. Phi ioh jingsneng aiu na 'Ka Jingmlien ha ka Kam'? 10

7. Phi tip aiu shaphang ki Siem synteng na ka *History jong ka Ri Khasi*? 15

## NEPALI

*Paper-setter*—MR. BODHBIKRAM ADHIKARI, M.A.

*Examiner*—MR. SURYA VIKRAM GEWALI, B.A., B.T.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Whom do you consider to be the greatest among the heroes who took the field in the Mahabharata, and why? 14

2. Describe in Nepali the part played by Shree Krishna in the Mahabharata. How far can you credit the victory of the Pandavas to him? 13

*Or,*

Give as many examples as you can to show that Yudhisthira is an embodiment of patience. 13

3. Which of the essays in Prabandha Rachana Sikshya appeals to you most, and why? 13

Give in your own words the main ideas contained in it.

4. Translate the following passage into Nepali:— 15

He accosted the first policeman and politely inquired his way. It turned out that he was already not far from his destination, and a walk of a few minutes brought him to a small house in a lane, freshly painted and kept with the most scrupulous attention. The knocker and bell-pull were highly polished; flowering pot-herbs garnished the sills of the different windows; and curtains of some rich material concealed the interior from the eyes of curious passengers. The place had an air of repose and secrecy; and Harry was so far caught with this spirit that he knocked

with more than usual discretion, and was more than usually careful to remove all impurity from his boots.

5. Expand the idea contained in the following:— 15

•विचार विद्या, बल, शक्ति, सत्व,  
विवेक, फूर्ति, पटुता, महत्त्व-  
सबै कुराको धनमा क बास,<sup>c</sup>  
धनै क सांसारिक सार खास ।

6. (a) Explain and illustrate the following proverbs:— 5

- (1) चगुल्ठोले हानेको कुकुर बिजुली देखी तर्सन्छ ।  
(2) म ताक्छु मूडी, बच्चरी ताक्छ घुडो ।

- (b) Give the figurative meanings of the following:— 5

- (1) मामाको घर देखाउनु । (2) कान तताउनु ।  
(3) सेतो घरमा जानु । (4) तौल गर्न जानु ।  
(5) जिरौफी घाम खुवाउनु ।

7. Write an essay in Nepali on *any one* of the following subjects:—20

- (1) The value of sports in the constitution of character.  
(2) The dark side of science as manifested by modern warfare.  
(3) Town life *versus* country life.

## ENGLISH

### ALTERNATIVE PAPER

*Paper-setter*—MR. A. K. CHANDA, M.A. (Oxon.)

*Examiner*—MR. K. C. ADDY, M.A. (Cal.), B.A. (Oxon.)

*Candidates are required to give their answers in their own words as far as practicable.*

*All the questions carry equal marks.*

*Answer Question 1 and any FOUR others.*

1. Give the context of any FOUR of the following extracts, naming the poems from which they are taken:—

- (a) O, be prepared, my Soul!  
To read the inconceivable, to scan  
The million forms of God those stars unroll  
When, in our turn, we show to them a Man.

- (b) I heard the universal choir,  
The Sons of Light exalt their Sire  
With universal song,  
Earth's lowliest and loudest notes  
Her million times ten million throats  
Exalt Him loud and long.  
And lips and lungs and tongues of Grace  
From every part and every place  
Within the shinning of His face,  
The universal throng.
- (c) Ay, they heard his foot upon the stirrup,  
And the sound of iron on stone,  
And how the silence surged softly backward,  
When the plunging hoofs are gone.
- (d) But in the purple pool there nothing grows,  
Not the white water-lily spoked with gold ;  
Though best she loves the hollows and well knows  
On quiet streams her broad shields to unfold . . .
- (e) Already fallen plum-bloom stars the green  
And apple-boughs as knarred as old toads' backs  
Wear their small roses ere a rose is seen. . . .
- (f) For the coward was drowned with the brave  
When our battle sheered up like a wave,  
And the dead to the desert we gave,  
And glory to God in our song.
- (g) Their shoulders held the sky suspended ;  
They stood, and earth's foundations stay ;  
What God abandoned, these defended,  
And saved the sum of things for pay.
2. What is the point of the reference to the wearing of a dark wig and to Mistress Mary Fenton in *The Rehearsal*?
3. Discuss the aptness of the title *The Philosopher of Butterbiggers*.
4. Give, in the form of a short story of not more than 500 words, the subject-matter of the play *The Little Man* or *The Bishop's Candlestick*.
5. Contrast the treatment of Sussex by Mr. Rudyard Kipling to Mr. Hilaire Belloc's treatment in his poem *The South Country*.
6. Discuss the difference in the tone of the 'war poems' of Messrs. Nichols, Rupert Brooke, A. E. Housman, and Laurence Binyon.
7. Quote from memory any EIGHT lines from a poem in *A Book of Modern Verse*.
8. Which of the plays in your text-book do you like best? Give reasons.
-



## ORIYA VERNACULAR

*Paper-setter*—MR. PRIYARANJAN SEN, M.A.

*Examiner*—MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain any two of the following passages with reference to the context:—

24

- (a) • ବଳାପନା ଅନ୍ତେ ବାଦିଣି ଶବଦ  
 ଭଟିଲ କମ୍ପାଇ ମଞ୍ଜୁ ବାଣୀପଦ.  
 ଶରେ ଶିରଶୁଦା ଯୋଗ ଦେଲେ ତହିଁ,  
 ସମୀର ନେଲ ତା ଦିଗେ ଦିଗେ ବହି,  
 ସେ ଉତ୍ସବେ ହୋଇ ଦରସେ ଉତ୍ସାହ  
 ଚଲିକା ! ତୋ ବାତୀ ତହିଁ ଦେଲେ ତାଳ,  
 ସେ ଘୋର ଅଧ୍ୟାନେ ଭାଙ୍ଗି ଗଲ ଧାନ,  
 ଧାନ ସଙ୍ଗେ ଦୃଶ୍ୟ ହେଲ ଅନ୍ତର୍ଦ୍ଧାନ.  
 ଜାଣିଲି ସେ ସବୁ କଳ୍ପନାକୌଶଳ ;  
 ଫେଡ଼ନ୍ତେ ନୟନ ଦେଖିଲି କେବଳ  
 ଅନନ୍ତ-ନୀଳମା-ଭୂମି-ବିଭ୍ରସିତ  
 ତୋ ଅମର ସତ୍ତ୍ୱ ଅଗ୍ରେ ବିରଜିତ ।

(b) ଯେ ପର୍ଯ୍ୟନ୍ତ କୌଣସି ବସନ୍ତ-ଲତର ଉପାୟ ନ ଥିଲା ସେ ପର୍ଯ୍ୟନ୍ତ ସ୍ୱାଧୀନୋଦ୍ଧାର କୌଣସି ଚନ୍ତ୍ରା ଜାତ ହୋଇ ନ ଥିଲା, ବରଂ ତେତେବେଳେ ମନେ କରୁଥିଲେ ସନ୍ତାନ ନ ହେବା ଭଲ । ସନ୍ତାନ ହେଲେ ସେମାନଙ୍କର ଭରଣପୋଷଣରେ ଅଧିକ ଖର୍ଚ୍ଚ ପଡ଼ିବ ଏବଂ ସେ ଖର୍ଚ୍ଚକୁ ତାଙ୍କର ପ୍ରକୃତରେ ବଳ ନ ଥିଲା । ମାତ୍ର ପିତାଙ୍କର ଚୌଧୁରୀ କାର୍ଯ୍ୟ ହେଲା ଉତ୍ସାହ ଦେଖି, ଯେତେବେଳେ ନାନା-ପ୍ରକାର ସମ୍ପଦ ଲାଭ ହେଲା ତେତେବେଳେ ତାଙ୍କ ଉତ୍ସାହ ସେ ସମ୍ପଦ କିଏ ଭୋଗ କରିବ ଏହି ଚନ୍ତ୍ରା କ୍ରମେ ବଞ୍ଚିତ ହେଲା ।

- (c) କାହିଁ ଗଲ ସେହି ବିଜୟ-ଉତ୍ସବ ?  
 ଭାଷିଲ ତୋ ବାଟେ ବିଜୟିକ ଶବ !  
 ଆସିଥିଲେ ଲେଖି ଭଲଲର ବିଦ୍ରୁ,  
 ବିହଲେ ଭଲଟ ଭର ପ୍ରାୟଶ୍ଚିତ !  
 ଭୁ-ଭଙ୍ଗରେ ଯାକ କମ୍ପିଲ ଭୁଲ,  
 ମଗ୍ନି ତଡ଼ିବାକୁ ଏବେ ନାହିଁ ବଳ !  
 ଦ୍ଵି ସପ୍ତ-ଭୁବନ ସେ ମଣିଲେ ତଳ,  
 ଅଣ୍ଟାରେ ସେ ସପ୍ତ-ଗୁଣ୍ଡର ତଳ !

2. Derive the words underlined above, and expound the *samāsas* in ଦ୍ଵି ସପ୍ତ-ଭୁବନ, ଭରଣପୋଷଣ, ବିଜୟ-ଉତ୍ସବ, and କଳ୍ପନାକୌଶଳ

12

3. Compare Radhanath Ray's *Chilikā* and Sasibhusan Ray's *Travels in the South* as descriptive works.

10

Or,

Give your estimate of the character of କଳାବତୀ or ରଘୁନାଥ ।

4. Expand the idea contained in :—

10

ଚର ଦାଦାମୟ ଏ ଶୁଭ ଶାବନ,

ଶାବନ ନୁହଇ, ଶାବନ ମରଣ !

5. Frame sentences with FOUR of the following in Oriya :—

8

ଭଣା, ଝାମ୍ପା, ମସିଣା, କଞ୍ଚ, ଗୁମ୍ଫା, ଅକାରୁଥ,

6. Write an essay in Oriya on ONE of the following subjects :—

20

(a) Vocational Education.

(b) Literature and Life.

(c) Floods in Orissa.

7. Translate either (a) or (b) into Oriya :—

16

(a) The things that led me at last into the paths of literature were not unique. I liked to know that I could do the trick, and I liked the checks which followed. But what has kept me at it? That is the question I ask myself. Why do I, in these days when I might be free as air, still stay at my desk and put black marks on sheets of paper?

(b) Kalu with all his people proceeded to where his son the Guru had fixed his habitation. Sikh societies then began to be formed. The Guru took off his extraordinary costume and dressed in a more conventional manner. With a cloth around his waist, a sheet over his shoulder, and a turban on his head, he looked the impersonation of holiness. The

string of his fame rose to heaven, it was said, like that of a kite. Every one addressed him, 'Hail, Nanak! a great saint hath been born in the world'.

## TAMIL

*Paper-setter & Examiner*—M. M. VEDANTAVISARAD N. S. ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) அழககாறு, (b) ஆற்றுவாரா, (c) இரத்தலிளா, (d) நகுதம் போல இப்பதங்களடங்கிய குறளகளை யெழுதி இவற்றின பதவுரைதெளிவுரைகளை எழுதவும். 15

2. (a) தொடைவிடைகள், (b) பரகீயம், (c) தினைபனை, (d) இல்லினகண இறத்தல, (e) நாமநீர், (f) மறறினபம், (g) தூற்றத்தல, (h) வீயாமை, (i) உளருணி இவ்வற்றின பொருளை எழுதவும் 15

3. அப்பரின திருநாமங்களையும் அவற்றின காரணங்களையும் வரைந்து, அவா பொத்தாக்களாலடைந்த துன்பங்கள் யாவை யென எழுதவும். 15

4. திருநீலகண்ட நாயனாரின கதையைச் சுருக்கி எழுதவும். 10

5. ஞானஸம்பந்தமூர்த்தியின சரித்ததை யொட்டி, "நமது கூடமை" எனப்பதைப்பற்றி ஓர் நீண்ட வியாஸம் எழுதவும். 20

6. Translate the following passage into Tamil:— 25

A man may be inactive or active but misguided or active in the right direction. Similarly a man may be ignorant or deluded or may have imperfect knowledge or may be wise. As regards pleasures also, there may not be really a clear conception of a happy life or it may be a combination of pleasures and miseries. Or it may be a continuous happy life. If we closely follow all these, we shall find that inactivity, ignorance and misery go together. So also imperfect knowledge and a combination of happiness and misery are companions of misguided activities. And harmonious activity, wisdom and incessant happiness go together.

## TELUGU

*Paper-setter and Examiner—DR. B. RAMCHANDAR RAU, M.A., PH.D.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following verses into an idiomatic Telugu passage:—

20

*The Call.*

Come, sweet my lad, come  
To our hamlet  
Where, in ebb and flow  
The river sweeps and rolls,  
Come, sweet my lad, come!

In the moonlight  
Athwart the floating foam,  
With the white sail unfurled,  
And turning dulcet notes  
Come, sweet my lad, come!

When I scull the boat  
With sidelong glances spying  
Thou wilt cast thy net  
For this silvery fish.

We shall sail on  
Athwart the heaving seas  
And merge in the moon  
Born of the ocean-wave.

2. నారదుడు ధర్మరాజుని నడిగిన రాజనీతి విషయములం గొన్నిటిని పేర్కొనుడు.

15

3. భీష్మ ప్రతిజ్ఞ గురించి మీ కేమి తెలియునో మీ స్వంత మాటలందు వ్రాయుడు.

15

4. “కర్పూరమంజరి” కథ భాగము విపులముగా వ్రాయుడు.

15

5. Give the context of the following passage, and explain its meaning:—

15

పాండుకుమారుల బరమధార్మికులని వగవక రాష్ట్రంబు వలన బాపి వసు పూర్ణమైన యివ్వసుమతి నేకొంటి వసుధేశ నీంక వగవ నేల కలశజవిదుర గంగాసుత ప్రభృతులు,

వారింప వశము గాక కర్ణ గాంధారుల కఱపులు వినివారి, కపకారి  
యయ్యె నీ యాత్మజుండు వగవ కధికులయిన వారితో వైరంబు,  
సేసికొంటి కరము చెట్ట యనక నీవు నీ సుతుండు నేర్తురుగా వారు,  
లే మిసేయ నేర్తురిందు కులుడ.

6. Write an essay in Telugu on—  
'Rural Reconstruction.'

### MALAYALAM

*Paper-setter and Examiner—MR. C. E. ABRAHAM, M.A., B.D.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Questions 2 and 3 and any other THREE.*

1. ദക്ഷിണം, ഇന്ത്യയിലെ ഗ్రాമജീവിതത്തെക്കു  
റിച്ച് ദേവമണിയിൽ 'നിന്നു എന്തു ഗ్రഹിക്കാം ? 16

2. Translate the following passage into Malayalam :— 20  
'Sugriva approved of this, and addressing Hanumān said :—"Known are ye for your great devotion to Rāma and Lakṣmaṇa. It is you who should go to find them out. The shame of this event rests on you, Hanumān ; for the enemy entered the fort by playing tricks on you. It is your fault and you are responsible for it. So you must exert yourself to the utmost, and rescue Rāma and Lakṣmaṇa. This I exhort on you both for preserving your own good name, and for your devotion to Rāma.— which is a byword with us." When the Monkey King Sugriva thus spoke to Hanumān, he looked pale with shame ; his eyes grew tearful for grief and for remorse. In a calm yet determined tone did he thus accept the task :—"I will search the earth, the heaven, and the nether-world, leaving no stone unturned. If I cannot find our masters out, know that I shall drown myself in the sea."

3. Write an essay on ONE of the following subjects :— 32  
(a) Politeness.  
(b) A festival you have witnessed.  
(c) Industries in Bengal.

4. Describe the രക്താഗ്నిശబ്దം. 16

5. Explain and criticize the moral teaching inculcated  
by Devamoni. 16

- 6 What part do the female characters play in *Leela* ? 16

7. Write what you know of ജയസിംഹൻ. 16

8. Estimate the character of the king in *Malakavi-kagnimitram*. 16

## GUJRATI

*Paper-setter*—DR. I. J. S. TARAPOREWALA, B.A., PH.D.

*Examiner*—MR. HARGOVIND DAS SETH

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

પહેલા ત્રણ સવાલો તથા બાકીનામાંથી કોઈપણ પાંચના જવાબ લખો.

I. નીચે લખેલા વિષયોમાંથી કોઈપણ એક પર નિબંધ લખો :— 20

(ક) વિદ્યાર્થી જીવનના આનંદો.

(ખ) એક ગામડાંનું વર્ણન.

(ગ) ગાય.

2. નીચલા ફકરાનો ટુંક સાર તમારા પોતાના શબ્દોમાં લખો :— 15

અનેક માસથી અવાવરાં પહેલાં ધ્રુવનું વાતાવરણ કેવું વિચિત્ર અને મીઠાશભર્યું લાગે છે ! આજના “ફેશનેબલ” જમાનામાં અમુક પ્રકૃતિના મનુષ્યોને એ રૂચે નહિ એ સ્વાભાવિક છે ; પણ અમને તો એ બહુ ગમતું અને આજ પણ ગમે છે. બહાર ગામથી અમુક સારા પ્રસંગે જ વન જવાનું થાય એટલે પણ એ ધરના વાતાવરણમાં શુભ પ્રસંગોનાં જ રમરણો ભર્યાં હોય અને તે ધરમાં પગ ચૂકતાંની સાથે જ ભૂતકાળ જગૃત થતાં એ રમ્ય પ્રસંગો આપણા હૃદયને બહેલાવી ચૂકે છે.

3. નીચલાંનો ગુજરાતી અનુવાદ કરો :—

15

Baber was a frank, open-hearted, cheerful man. He was patient in adversity and hopeful even after defeat. He possessed noble ambitions, boundless courage, and a spirit which loved adventure. He was a skilful general and a mild, just, and geneous administrator. He was fond of arts and literature. He wrote both in prose and poetry, and his writings are justly famous for their dlightful style.

4. “કરણુ ઘેલા”માં કેશવના મૃત્યુ તથા ગુણસુંદરીના સતી થવાનું વર્ણન આપ્યું છે તેનો ટુંકમાં સાર આપો.

10

5. રાજા કરણને પોતાના પાપ કર્મનો પરતાવો થયો હતો શું ? અને તેમ હોય તો કેવે પ્રકારે થયો તે દર્શાવો.

10

6. માધવે “વેરની વસુલાત” કરી તે બાબે તમારો શો અભિપ્રાય છે ? 10

7. န္ဍာပါဏ် နဗု နာဃ တမ္ဗေ နောဃီ ဝဃာေ ဂမေ ဇေ ? တောံ နာရဃောဝါ သေဝါ. 10
8. န္ဍာဃ နာရဃောဝါ သေဝါ နာဃ တမ္ဗေ ဝါဗုဓ် န္ဍာဃ တောံ နာရ နာဃော. 10
9. “ဇာ်ဃာ နာရဃောဝါ” ဝါဃေ နာဃ ဝါဗုဓ် န္ဍာဃ တောံ နာရ နာဃော. 10

## BURMESE

*Paper-setter—MAUNG BA, B.A.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1 (က) သုတသောမမင်းကြီးသည် ပေါရိသဒ္ဓါအား ယုတ်မာသော အကျင့်တို့ကို ဖွန့်ပြစ်ရန် ဟောပြောဆုံးမသော အကြောင်းကို ရေးသားပါ။ 10

(ခ) ပဉ္စပါဒီနှင့် ဗာရာဏသီပြည့်ရှင် ဗကစောထီးထွန်ရာ ဇာတိနှစ်ဦးတွေ့ဆုံချစ်ကျွမ်းဝင်ကြသော အကြောင်းကို ရေးသားပါ။ 10

(ဂ) မြန်မာမင်းလက်ထက် ကတရားစီရင်ဆုံးဖြတ်ခြင်း အကြောင်းကို ရေစင်္ကြံနံတော်ဖြတ်ဆုံးအရေးသားဖော်ပြပါ။ 10

(ဃ) မြန်မာမင်းလက်ထက် ကမြန်မာများသည် စစ်ရေးစစ်ရာတို့၌ ကျင်လည်ကြောင်း၊ ရဲရင့်သောသတ္တိရှိကြောင်း၊ ဥပါယ်တမည် နိဗ္ဗာန်အထိဗ္ဗာကြီးကြောင်းတို့ကို မောင်ကုလားရာဇဝင်မှ သက်သေသဒ္ဓါအထုတ်ပြရေးသားဖော်ပြပါ။ 10

2. အောက်ပါလင်္ကာ၏ အနက်အဓိပ္ပာယ်ကို ရေးသားဖော်ပြပါ။ 15

ကြဉ်ရှောင်စေ၊ ပယ်ထွေကုန်ကြ၊ မေရယငါး၊ သုရငါးနှင့်၊  
 မိုးရွာလေံကျ၊ မြူညိုနောက်တင်၊ သန့်စင်မကြည်၊ ရေကိုသည်  
 ထည်း၊ ချပ်ထည်အာသာ၊ မသောက်ရာတည့်၊ ဘယ်ညာထွေထက်၊  
 ငရုတ်ထေး၊ ထက်ဝါးပြောင်းပြန်၊ ကိုင်ဟန်လှန်မောက်၊ မသောက်  
 ပြန်သာ၊ ယင်းမှာရေထုတ်၊ ယင်းရေရှုတ်ကို၊ မမြိုလေထိုက်၊ မကြိုက်  
 လေအပ်၊ သတိချပ်လော့၊ ရှစ်ရပ်မျှော်ရည်၊ ဆီကြည်ထောပတ်၊

မြန် မွန် မြတ်လည်း၊ ဩက် ထတ် သောအား၊ အောက် တား၍၊ မများ  
 ဝေရာ၊ လင့် ရုံမျှသာ၊ သောစာ လေရာ၍၊ စာနာခန့်ချ၊ မျက်စိ အကျင့်၊  
 ဝမ်းအချင့်ဟု၊ ယခင်ဝေါဟာ၊ ထင်အားစွာရှင့်၊ သူရသောက်ဝယ်၊  
 ပြစ်မြောက် သွယ်ကား၊ ထိုမယ် မရ၊ ရှိမျှဥစ္စာ၊ ပျောက် ထတ် စွာ၍၊  
 နှုတ်သာလကလွန်၊ ရန်လည်းဦက်ထိ၊ ပွားထတ်ထိ၍၊ မျက်စိသိဝေ၊  
 လက် ခြေတုန်ရင်၊ မဝင်ဝမ်းတွင်း၊ ထမင်းမစား၊ ခေါ်ဂါများ၍၊  
 ပြစ်သားစင်စင်၊ လှရှင်ကဲ့ရဲ့၊ သိတင်းမဲ့၍၊ ရှက်ဖွဲ့အရာ၊ ကြောက်  
 ခွင့်မှာလည်း၊ အင်္ဂါကိုယ်ထုံး၊ မမှီးတွင်းနှိုင်း၊ ယုတ်ဆုံးတိုင်၍၊ စွဲကိုင်  
 ကျိုးပြစ်၊ စိစစ်မမြင်၊ ဆင်ခြင် မရှိ၊ သတိပညာ၊ လျော့ညံ့ရာသည်။  
 ။မကြာလက်ငင်းမထွေတည်း။

3. ရကန်စပ် ဆိုရေးသားခြင်းဖြင့်မြန်မာစာစီကုံးရာ၌မည်ကဲ့သို့  
 အနှစ်သာရထူးချွန်သည့်အကြောင်းရေးသားဖော်ပြပါ။ 10

4. Translate into Burmese:— 15

Health, happiness, and contentment go together, and the conditions that make people happy and contented are those also that make them healthy. If we know what is needed in our homes and how to perform our household duties, we can go far to obtain comfort and health without spending a great deal of money. It is ignorance and thoughtlessness that cause waste. Through ignorance we may buy and eat the wrong kinds of food, we may cook good food badly, or allow things to fall into a dirty, disagreeable state, so that poverty, discomfort, ill-temper, and ill-health may be the result. The requirements of a healthy home are not more costly than the upkeep of a home lacking in health and comfort. Sunshine, fresh air, pure water, and cleanliness are not a matter of money but are free to rich and poor alike.

5. အောက်ပါအကြောင်းအရာထဲ၌အဘယ်အရာကိုစာစီကုံးရေးသားပါ။ 20

- (က) မြန်မာပြည်၏ပစ္စုပ္ပန်ခေတ်။
- (ခ) ထူထိုက်အကျင့်စာရိတ္တ။
- (ဂ) ယခုခေတ်ဆန်းမြန်မာစာစီကုံးခြင်း။



## PORTUGUESE

*Paper-setter and Examiner*—DR. P. D. BRAGANCA CUNHA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write a short essay in Portuguese on Herculano's *Presbytero*. 35
2. Give in your own words the meaning of the following verses of Junqueiro:— 25

(1)

Eis as creanças vermelhas  
Na sua hedionda prisão  
Dourado enxame de abelhas  
O mestre-escola é o zangão.

(2)

Em duros bancos de pinho  
Senta-se a turba sonora  
Dos corpos feitos de arminho,  
Das almas feitas d'aurora.

(3)

Soletram versos e prosas  
Horíveis, contudo, ao lê-las,  
D'aquellas bocas de rosas  
Saem murmurios de estrelas.

(4)

Contemplam de quando em quando,  
E com que inveja, Senhor  
As andorinhas passando  
Do Azul no livre esplendor.

(5)

Oh, que existencia doirada  
Lá cima, no azul, na gloria,  
Sem cartilhas, sem taboada,  
Sem mestre e sem palmatória.

3. Write a short letter in Portuguese to a friend giving impressions of your holiday. 25
4. Conjugate the following verbs in the future indicative:—*querer, trazer, ver*. 15

## MODERN TIBETAN

*Paper-setter and Examiner*—DR. SATKARI MOOKERJEE, M.A., Ph.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following passage into Modern Tibetan:— 40  
There is yet another aspect of education to which allusion is necessary. No matter what the deficiencies of the school, it is left to a great

extent to a man to improve himself, and less would be heard of the 'badly educated community', if its members found a little energy to improve their minds by reading—reading of the right sort and with intelligence. It is deplorable to come across a person who will not look into a book, good, bad, or indifferent. Blame him, blame the school for this attitude; but the reason will, in most cases, be found at a much earlier age, . . . when a taste for literature might have been engendered, but was not. Very often a distaste for reading is the result of an ill-considered insistence on a child's *learning* its books, the enforced concentration on spelling and punctuation alone killing any interest that a good book may possess. A sad, but not surprising, commentary on Eurasians is contained in a Calcutta Y. M. C. A.'s report, in which it is stated that their taste in literature (where it is present) appears to be confined to light novels, while Indians, in marked contrast, show a preference for works on philosophy.

2. Give a brief account of the achievements of Jo-wo Atiśa in Ser-ling. 10
3. Give in your own words a brief summary of the story of *Do-wa-saḥ-mo* with comments where necessary. 10
4. Conjugate the following roots in the past and future tenses, and in the imperative mood, with illustration of ONE form of any ONE root:—

འགྲུབ་པ; ལྷུབ་པ; འཆད or བཞོད་པ | 10

5. Correct the errors in the following:— 5

གཤེས་རབ་དང་ཉམ་མིགས་མེད་དེ། མྱོང་པ་དང་གཞིན་སྤྲད་པ་མེད།

6. Write a short essay in Modern Tibetan on any ONE of the following:— 25
- (a) Village life in Tibet and its neighbourhood; its requirements and possible remedies.
- (b) Success in life is due to industry and enterprise.
- (c) Education is its own reward.

## MODERN ARMENIAN

*Paper-setter and Examiner*—MR. M. J. SEIH, M.R.A.S.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write in Modern Armenian the history of Modern Armenian literature. 15
2. Explain fully in Modern Armenian:— 15

Իսկ հաւատացեալքն հաստատեալք ի Վրիստոս, ոչ ի սառնամանեաց ձմերայնւոյն հովանային, և ոչ ի տապոյ խորշակին ջերմութիւն, և ոչ յահագին ձայնէն սարսէին, և ոչ ի սպառնալեաց տանջանայն զանգիտէին, այլ ի վեր հայեցեալք՝ զգորութիւնն Վրիստոսի յօգնականութիւն եկեալ տեսանէին, և զուարթագին դիմօք և համեստ բանիւք յառաջ մատուցեալ՝ տային պատասխանի թաղաւորին:

3. Write an essay in Modern Armenian on one of the following subjects:— 20

- (a) Վրաբառի կարևորութիւնն՝ Հայ գրականութեան համար:  
 (b) Հայերէնի ուսումն Ներկաստանում:  
 (c) Ներկաստանի քաղաքական շարժումն:  
 (d) Սարգսիւրական ճեմարանի պատմութիւնը:

4. Translate into Modern Armenian:— 15

In the course of your life you will no doubt sometimes make mistakes or do wrong. Admit the error, instead of endeavouring to shield yourself from blame by equivocation or falsehood, adding, 'I am sorry, and will try that it shall not occur again'. Anger is thus disarmed, while want of truthfulness only makes things worse. Liars are generally discovered in the end.

5. Frame sentences in Modern Armenian to illustrate the following words:— 10

Համենայն դէպս, անյայաղ, յարաժամ, մոռնութիւն, հոգեբանութիւն, տնտեսական, նիւթական, բարոյական, կենցաղ, պատահումներ:

6. What is the difference between a հայցական սեռի խնդիր and a բնութեան խնդիր? 5

7. Translate into English:— 15

Վրութիւնը ծանրացաւ մանաւանդ ժը դարի առաջին քառորդից: Լուդանների արշաւանքը առաջին մահացու հարուածն էր հասցնում ջուղային, որ կողոպտուեց, ծանր տուգանքի ենթարկուեց: Լյոնէհտե օլարսկաստանում յեղափոխութիւնները հետեւում են յեղափոխութիւններին, կատարեալ անիշխանութեան երկարատեւ ժամանակամիջոցներ են ծանրանում երկրի վրայ: 'Լոր-Ջուղան աստիճանաբար և դանդաղ մեռնում է այդ տակնուվրայութիւնների միջոցին և վերածւում է մի խեղճ օլարսկան աւանի, պահելով իր նախկին փայլից միմիայն աւերակներ:

8. How many kinds of adverbs and adjectives are there in the Armenian language? Give examples. 5

## MANIPURI

*Paper-setter and Examiner—MR. DWIJAMANI DEBSARMA, M.A.*

*Candidates are required to give their answers in their own words as far as possible. \**

*The figures in the margin indicate full marks.*

1. Translate into Manipuri:—

A true poet lives in himself the life of his nation at its best. He feels in his own heart the loftiest longings and aspirations of humanity. What to others are occasional glimpses of Truth and dim perceptions of Reality are to the poet a permanent experience which breaks out in a spontaneous flood of music. He, in common with the philosopher, strives after the truth of existence, but while the latter argues and reflects, the former perceives by intuition or in the light of inspiration. His soul apprehends Beauty in things trivial. To ordinary folk, the wayside primrose may be but a primrose and nothing more, but to one who has the poetic imagination, it is an expression of Divine Joy—God himself peering out of it with a look of inexpressible serenity and peace.

2. Give the character of the heroine of the Satikhongnang. 14

3. Explain in Manipuri any two of the following passages with reference to the context:— 7+7

(a) তেংবানবা ঈপাক্তা

পুনসিগী হৌথক্তা.

হৌরোই-পাক্তমিদি ওইরিবা

নৌরেন্দি-পাক্তহুনা ফমলিবা

হৌনাও-ও-অথোইবা

নংনা নিংবা থুংউ।

(b) কল্পবা ঈঠৈসে পাকলবা ঈপাকস্বে

কুমথরো ঈয়াঈদা

অমুক ফমলগহু হে লংকৈ!

(c) চংজরি ওসিদি নংগীবু নফমদা

পুনসি-লৈরাংদি অথেম্মা,

নিজরি লুকনদি লৌবিনি অথেলি

হুংশিবা নংগী থোজাম্মা।

4. Amplify the idea contained in EITHER of the following:— 10

(a) ঐথোইনা তেংবানবা অসিদা কনাবু করিনি হাঈনা থংছনা মহাকী থুয়াদা কবিগী মতিকচাবা থুদোল নজগা লৈরাংগী থুজোক অমতংহু কত্তুনা পেন্সিসিগে ফনা লুবা পাওখুমনি।

(b) অমরোমদা মীনা করি হাঈথিগদগে হাঈছনা কিবা অসি মতম অয়মদা ঐথোইগী চাওখংপগী লম্বীদা পনগী মশকনি।

5. Give in simple Manipuri the substance of the following:— 10

অওইবমক, ঐথোই মৌওইবা অপুষ্ণী অককনবা লক্ষ্য অমম লৈ হাউঁবা  
অসি অচুমকনি। ভৌইগুম্বুং মাসি অপাষদগী ডাক্তা থোকপনি হাউঁবা  
নিংবদি ফনা অচুয়া লৈছনস্ত অরানবা য়াওদবদি নন্তে। মরমদি অপাষনা ঐগী  
পুনসিগী পাংগদবা থবকৌ লময়ানবদা তেংবাংনৈ হাউঁবদি অরানবা নন্তে।  
ভৌইগুম্বুং মহোশাগী পাকল অহুগা ল্যচং অমম্বুং বাখল নত্রগা পোংখিগী  
ফিবম অওইবা ফংবুদগী লেপলবা শিন অহু পুনসিগী অপাষা অতৈ অতৈগা  
লোইন লোইননা পাংথোকনবা লাকনবা অসি মৌওইবগী অনি লোংত্রবা  
চংকদবা লখৌনি।

6. Construct sentences using any SEVEN of the following:— 7

লাউোন, তামলবা, কোরোইনবা, নাবা, মুজা, পজ্জং, কোলোই, থমম্বুং,  
তাংলৌ অমম্বুং শকলোন।

7. How do you parse the underlined in the following sentence?  
Give reasons for your answer:— 5

ঐগী ইথক্কা উচেক অমা পাইপ্লে।

8. Write an essay in Manipuri on any ONE of the following subjects:— 25

- Advantages and disadvantages of city-life.
- The village-sports of Manipur.
- Child-education.

## SINHALESE

*Paper-setter and Examiner*—MR. DEVAPRIYA WALI SINHA, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

එකල එම නුවර නැගෙනහිර වාසල්දෙරින්  
පිටත විවිශෙහි එක් දිලිසු කුලයෙක්හි පැවිසාපා  
නම් එක් දුවක් ඇත්තිය. ඕනොමෝ පෙරන් දිලිසු  
කුලයෙහි ඉපිද මැටි අනාසනාහිකන්ගෙහි මැටිගසන  
කල්හි එක් පසේ බුදු කෙනොකුන් වහන්සේ වැඩ  
වසන ප්‍රාග්භාරගෙහි වැලිමැටි ලන පිණිස මැටි  
කෙසේ ලැබේදැයි ආවර්ජනා කරණයෙක් බරණැස්  
නුවර සම්මිපයෙන් ලැබ ගනහැක්කැයි දැනවැදුරා

ගැවවු ගත්වාගෙන පාත්‍රය සිවුරු අස්සේ බරා  
ඇව නුදුරු තෙනක වැඩිකුත්සේක. බත් උදෙසා  
වැඩිසෙත් වැනැයි අඟරනැතිබව ඇහවුද නොවැඩි  
සිටි ගෙසින් ඕනොමෝ කිපි බලන්තේ “මනණ තව  
මැටිත් අරුමනියාච්චිද” යි මහත් මැටිපිඩක් ගෙන  
ගොස් පාත්‍රයෙහි ලාඝුව. ඔබද ඒමැටිපිඩ ගෙනගොස්  
තමත්වහන්සේ වසනනැන වැළිමැටිලා වදාලසේක.  
මෙසේ එ පසේ බුදුන්ව නො අදහාත් මැටිපිළිගැන්  
වූ කුසලබලයෙන් දිව පහස් බදු ශරීර පහස් ඇතිවිය.

2. Explain the following:—

20

දිය කඳ ගැඹර පිරිපුවතර මහසසු ර  
මුවරද ලෙසින් වන අගනිසි කරතඹ ර  
මනනද කරන මිණිගණමෙන් දිසි එව ර  
පැහැනද පහන් එහි මහවේයා බල මතු ර

3. Write an account of the attempts made by Devadatta to assassinate Gautama Buddha. 20

4. Explain Putra Prasna or Udyāna Prasna. 20

5. Write an essay in Sinhalese on ONE of the following:— 20

- Truthfulness.
- A visit to a historic place.
- Your greatest hero in history.

## KANARESE

*Paper-setter and Examiner*—MR. P. APPAJI RAO, B.Sc.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Kanarese:—

15

Marie Slodowska, daughter of a professor in one of Warsaw's colleges, in addition to the usual schoolgirl education helped her father in his laboratory. If she lacked wealth she did not want for teaching, and with her father's help she went as far as Warsaw's scientific facilities allowed. But Warsaw was a stage on her journey only, Paris was its goal; and since money was needed she gave private teaching until she had saved enough for the great venture. Here we see industry and set purpose, but also a full home-life with the amenities of a middle-class cultured circle and with a full meed of affection between parent and child. Then came the Paris Faculty of Science where, to quote her own words, 'for three years I worked incessantly'. The result was marked by diplomas in mathematical and physical sciences, but over and above the work required for these she had engaged in research work. Nor was this all. In the

course of her research work she met Pierre Curie. Once more we quote her lucid terseness: 'I had the good fortune to meet Pierre Curie at the Faculty of Science, Paris, and I married him in 1895. My husband devoted his whole life to scientific research and I shared his work from that period in a complete accord of mutual aspiration. So it was that I stayed in France, my adopted country, while remaining in touch with Poland, my native land'.

2. Write an essay in Kanarese on any ONE of the following subjects:—

(a) Floods—their havoc on human life and property—their temporary grandeur on countryside—their periodic visitation an occasion of care and vigilance to the authorities.

(a) Amusements—various types—relaxation of mind—excesses and their after-effects.

(c) The value of a good local museum; describe one that you have seen.

(d) Gold and its place in this world.

3. Explain fully:—

10

ದೊರೆಗಳಿಗೆ ಆಜ್ಞಾಭಂಗವೂ, ಬ್ರಾಹ್ಮಣರಿಗೆ ಮಾನಭಂಗವೂ, ಸ್ತ್ರೀಯರಿಗೆ ಬೇರೆ ಹಾಸಿಗೆಯೂ, ಆಯುಧಹತಿಯಿಲ್ಲದ ಕೊಲೆ—ಎಂದು ಹೇಳಿದೆ.

4. Babhruvāhana kills Vṛishaketu and Arjuna. Describe how ಚಿತ್ರಾಂಗದೇ and ಉಲೂಪಿ help him in bringing the dead to life.

10

5. Describe any one of the characters you like best in Vikramorvasiya Nāṭaka.

20

6. 'The study of Raghuvamśa inspires the reader with lofty ideals.' Justify this remark.

10

7. Develop the ideas contained in the following:—

10

ಕಾಶ್ಯಪೇಂದ್ರೋದಯ ನಗರ |

ದೋಷೇಂದ್ರೋದಯ ತಿಂಡಿ |

ಆಸೇಂದ್ರೋದಯ ಹಾಳು |

ವಿಾಸೇಂದ್ರೋದಯ ಕೂದಲು ||

8. Write short sentences illustrating the use of the following:—

5

(a) ವೈಯಾರಿ ಮಣಿ.

(b) ಮನಸಾರಾ.

(c) ಧರಣೀತಲದೊಳ.

## SANSKRIT

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate freely into English any two from Group A, ONE from Group B, and ONE from Group C:— 4 × 6 = 24

## Group A

(a) एकातपन्नं जगतः प्रभुत्वं नवः वयः कान्तमिदं वपुषः ।

अस्यैव ईतीर्यं दुःखं तनुमिच्छन् विचारमूढः प्रतिभासि मे त्वम् ॥



- (b) तनाङ्गितौत्सुक्यमदर्शनेन प्रजाः प्रजार्थव्रतकर्षिताङ्गम् ।  
नैवेः पपुस्तुतिमनाम् बुद्धिर्नवीदयं नाद्यनिवीषधैनाम् ॥
- (c) अथैकधनीरुपराधचच्छाद गुरोः कृशानुप्रतिमाद विमेषि ?  
शक्योऽस्य मन्त्रुर्भवता विनेतुं गाः कोटिश्चः स्पर्शयता घटीष्ठीः ॥
- (d) प्रत्यन्नवीचै नमिषुप्रयोगे तत्पूर्वभङ्गे वितयप्रयवः ।  
जडोक्ततच्छान्दकवीचयेन वज्रं मुमुक्षन्निव वज्रपाणिः ॥

## Group B

- (a) महीय्यमाना भवतातिमात्रं सुराध्वरे चक्षरजित्वरेण ।  
दिदोऽपि वज्रायुधभूषणाया क्रिषीयते वीरवती न भूमिः ॥
- (b) इत्थं प्रवादं युधि संप्रह्वारं प्रचक्रतू रामनिशाविहारौ ।  
दृष्ट्वाय मत्वा रघुनन्दनोऽथ बाणेन रजः प्रधानमिरास्यत् ॥
- (c) रक्षांसि वेदोऽं परितो निरास्यदङ्गान्वयाचीदमितः प्रधानम् ।  
शेषास्यह्वीवीत् सुतद्वन्द्ये च वरं वरेष्यो वृपतेरमार्गोत् ॥

## Group C

- (a) अथ चित्तं समाधातुं न शक्नोषि मयि स्थिरम् ।  
अभ्यासयोगेन ततो मामिच्छातुं धनञ्जय ॥
- (b) यो न हृष्यति न हेष्टि न शोचति ना काङ्क्षति ।  
शुभाशुभपरित्यागी भक्तिमान् यः स मे प्रियः ॥
- (c) ये तु सर्वाणि कर्माणि मयि संन्यस्य मत्पराः ।  
अनन्ये नैव योगिन मां ध्यायन्त उपासते ॥

2. (a) Account for the case-endings in अल्पस्य in (a) in Group A.

Justify वृष्टी in मे in (a) in Group A.

Account for the case-endings in दिवः in (a) in Group B, and दृष्ट्वाय in (b) in Group B.

Give one word for कृतुमिच्छति ।

5

(b) Either, Elucidate the allusion in (d) in Group A.

6

Or, Amplify the idea contained in त्यागाच्छान्तिर्निरन्तरम् ।

(c) Expound the *samāsas* in any THREE of the following :—

6

वज्रपाणिः । एकातपवम् । घटीष्ठीः । तत्पूर्वभङ्गे । चाङ्गितौत्सुक्यम् ।

3. (a) Either, Give the description of Ayodhyā as given in *Bhāṣikāvya*, Canto I.

8

Or, Who according to the Lord Kṛishṇa, is his greatest favourite ?

(b) Give one word for any THREE of the following :—

3

पातुमिच्छति । शब्दं करोति । श्रुतमनः प्रमिच्छति । लक्ष्मीर्यस्यासि । सभायां साधुः ।

(c) Give the *lū* third person singular of the roots in any THREE of the following :—

3

इच्छन् । मत्वा । मुमुचन् । शोचति । प्रतिभासि ।

(d) Give the *lū* third person singular of the roots in any THREE of the following :—

3

पपुः । बिभेधि । विनितुम् । पचकतुः ।

(e) Derive any FIVE of the following :—

5

जित्वरः । वीचयम् । वरेष्टः । मन्दनः । घनज्ञयः । इत्यम् । अभ्यासः । जगत् ।

4. (a) Frame sentences to illustrate the use of any THREE of the following :—

3

(i) समाहारविगु ।

(ii) कृत्योर्गे कर्मणि षष्ठी ।

(iii) तस्य च वर्त्तमाने ।

(iv) A word taking fourth case-ending in connection with चत्तम्

(b) Correct any FOUR of the following :—

8

(i) उज्जयिन्वां रामेति कश्चिद् बणिक् अभ्युवास ।

(ii) धर्मस्य जिज्ञासुः स चधुना शास्त्रमधीते ।

(iii) मे विषयं मुखं दृष्ट्वा नरपत्युस्तस्य कृपा संजाता ।

(iv) एकदा पूर्वदिशि दिशि प्रतस्थौ असौ राजानः ।

(v) ग्रामस्य निकषा विद्यते कश्चित् पन्था ।

(vi) व्याघ्रस्य विभ्यन् स गृहं प्रस्थितः ।

5. Translate into Sanskrit any FIVE of the following :—

25

(a) Now the king proceeded in his hunting expedition, but before he had advanced far, he felt tired.

(b) Once upon a time there was a wood-cutter in the Deccan, who lived in abject poverty and knew no earthly happiness.

(c) This changed position of his filled him with joy, and he began to regard himself as superior to all human beings.

(d) He was returning home one summer night, when he saw that the sky had become overcast with clouds.

(e) Day by day he grew dejected. But one morning he awoke full of joy and hurried to the temple, where he remained for an hour.

(f) Once upon a time there lived a potter who owned ten or twelve donkeys. He was a bit of a fool, and was the laughing-stock of all.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any THREE of the following:— 15

(a) अन्धविद् जन्मनि न कृतमवदात् कर्म, जन्मान्तरकृतं हि कर्म फलमुपनयति पुरुषस्येह जन्मनि । न हि शक्यं दैवमन्यथाकर्तुमभियुक्तं नपि । यावत् मानुष्यके शक्यमुपपादयितुं तावत् सर्वमुपपाद्यताम् ।

(b) तस्मिन् किल स एकलः पुलङ्गाश्रमोपवने विविध-कुसुमकिसलय-तुलसिकाण्डभिः कन्दमूलफलोपहारेण समोहमानी भगवत् आराधनम् । विविक्त उपरतविषयाभिन्नाय उपसम्भृती-पश्यन् परां निर्भर्तिमवाप ।

(c) सेयमाकृतिर्न व्यभिचरति शीलम्, आसज्जति च मे हृदयमस्यामेव । तत् परीक्ष्येणामुपहृयम् । अविश्वशकारिणां हि नितयमनेकाः पतन्नानुश्रयपरम्पराः इति क्षिण्वद्वटिराचष्ट—“भद्रे, कश्चिदस्ति न्यौशलम् ?”

(d) दयित, त्वत्प्रसादादय मे चरितार्था शीववृत्तिः । अद्य मे मनसि तमोपहृत्स्वया दत्तो ज्ञानप्रदीपः । पञ्चमिदानीं त्वत्पादपद्मपरिचर्याफलम् । अस्य च त्वत्प्रसादस्य किमुपकृत्य प्रत्यपकृतवती भवेयम् ?

(e) शिबिरवाच—

नैवाहमेतद् यशसे ददानि

न चार्थहेतोर्न च भोगटण्डया ।

पापैरनासेवित एष मार्ग-

इत्येवमेतत् सकलं करोमि ॥

2. (a) Either, Account for वही in the underlined word in शब्दमिव मे प्रतिभाति जगत् । 2

Or, Give in simple English the substance of—

मासादाराणांमननुषादाराणां वा सुखं नाम ।

(b) Either, Derive मानुष्यक and expound the samāsa in जन्मान्तरकृतम् in (a) in Question 1. 4

Or, Change the voice in तमोपहृत्स्वया दत्तो ज्ञानप्रदीपः and अशिकां कुब-गुह्यं भक्तिम् ।

(c) *Either*, Give the *iii* third person singular of the roots in आसञ्जति, उपपाद्यताम्, and उद्वेग्यम् । 3

Or, Derive the following words :—पङ्कज, सनीहमान; and क्षिण्वः ।

3. *Either*, Amplify and illustrate the idea contained in अभीषफला हि महामुनिसिवा भवति । 6

Or, Explain in your own English :—

आवेदयन्ति हि प्रत्यासन्नमानन्दमयपातीनि शुभानि निमित्तानि । अबितयफलाश्च प्राये निशावसानसमयदृष्टा भवन्ति स्वप्नाः ।

4. (a) Account for the case-endings in any THREE of the underlined words :— 3

चक्षुषा काणः ।

पाकाय याति ।

घटः पटादितरः ।

उभयतः कृष्णं गोपाः ।

गोषु कृष्णा बहुचोरा ।

मासेन व्याकरणमधीतम् ।

(b) Correct any THREE of the following :— 6

(i) गुरोरागमनस्य प्रागेव शिष्येणाग्रमं प्रविष्टम् ।

(ii) रात्रे आगते पक्षीचः कुलाय प्रतिष्ठन्ति ।

(iii) व्याघ्रं विध्यन्ते प्राचं रक्षार्थं चण्वं स्थानं गताः ।

(iv) भगवन्तं वरचं कुट्ट, स हि विभुवनानां शरणः ।

(c) Make short sentences to illustrate any THREE of the following :— 6

(i) A verb with double objects.

(ii) The word प्रधान or प्रमाण as an adjective ( विधेय ).

(iii) वृक्षसमस of words denoting animals that are in perpetual strife.

(iv) The comparative and superlative forms of प्रिय.

(v) The feminine forms of उपाध्याय.

5. Translate into English any THREE of the following :— 30

(a) तत एवममुञ्चति सत्याकाशे नीयमानं तं कूर्ममालोक्य सर्वे गोरक्षकाः पश्चाद धावन्ति वदन्ति च—अहो ! महदाश्चर्यम् ! पक्षिभ्यां कूर्मः समुद्यते । तत्र कदिदाह— यद्ययं कूर्मः पतति तदादेव पक्षा खादितव्यः, कोऽपि निगदति—एवं नेतव्यः ।

(b) अहो राज्ञोऽस्य दौःशील्यं येनैतन्नासमन्त्राकं प्रयच्छति, किमेतद् द्रव्यजातमिति ध्यानपरीक्षुम्, अपमृश्य तन्मानुषं मांसम् । ततश्च क्रीधकसुषीकृतचेता राजानं प्रति

श्रापमुत्सर्ज—यथादभोज्यमद्यविधानां तपस्विनामवगच्छन्नपि भवान् मद्यं ददाति तस्मात्तवैवाव  
लीलुपा बुद्धिर्भविष्यतीति ।

(c) आदौ धाराराज्ये सिन्धुसंज्ञी राजा चिरं प्रजाः पर्यपालयत् । तस्य हस्तले भीज  
इति पुत्रः समजनि । स यदा पञ्चवार्षिकः, तदा पिता चात्मनी जरां ज्ञात्वा मुख्यामात्यानाङ्ग्य,  
अनुजं मुञ्चं महाबलमालोक्य पुत्रश्च बालं वीक्ष्य विचारयामास—यदाहं राजलक्ष्मीभारधारणसमर्थं  
सोदरमपहाय राज्यं पुत्राय प्रयच्छामि तर्हि लोकापवादः ।

(d) पिङ्गलकः । 'सेवकं व्यापाद सशोकं' किं मया दाक्यं कर्म कृतम् ।

दमनकः । 'स्वामिन् ! कोऽयं नृपतपो न्यायः, यदराति' इत्या सन्नापः क्रियते ?  
तथाश्चक्रम्—

पिता वा यदि वा भ्राता पुत्रो वा यदि वा सुहृत् ।

प्राणच्छेदकरा राज्ञा हन्तव्या भूतिमिच्छता ॥

6. Translate into Sanskrit any FIVE of the following :—

25

(a) Having slain his great enemy Ravana, the demon-king of Lañkā, and returned with his wife Sītā to Ayodhyā, Rām gave all his thoughts to the affairs of his kingdom.

(b) There was a certain island in the sea, the only human inhabitants of which were an old man, whose name was Prospero, and his beautiful daughter Miranda.

(c) Prithvīrāj furious at this, did not wait to hear any more, but drew his sword on Sanga, and was joined by Jaimal. Surajmal took the side of his eldest brother.

(d) Vālmīki then related all that had befallen Sītā, the wife of Rāma, since the day when Lakṣmaṇa had left her on the side of the Ganges.

(e) Rāma then turned to his brothers and said : 'I now desire that you will set to work immediately, since there is no reason for delay, and there is much to be done.'

(f) A hare one day was speaking scornfully of the short legs of a tortoise and his slowness. The tortoise quietly replied, 'You may be as swift as the wind, but I will beat you in a race.'

(g) The tiger is the lord of the forest. He is a very strong beast, and is said to be stronger than the lion. He looks like a great cat, and he has many of the habits of a cat.

## PĀLI

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## FIRST PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

- Translate into English any FOUR of the following passages:—20
  - Aladdhā tattha assādaṃ vāyas' etto apakkami.  
kāko va selaṃ āsajja nibbijjāpema Gotamaṃ.  
Tassa sokaparetassa viṇa kacchā abhassatha,  
tato so dummano yakkho tatth' ev' aṇḍaradhāyathā'it.
  - Lābhā vata no anappakā, ye mayaṃ Bhagavantaṃ addasāma,  
saraṇaṃ taṃ upema cakkhuma, satthā no hohi tuvaṃ mahāmuni.  
Gopi ca ahaṃ ca assāvā, brahmacariyaṃ Sugate carāma,  
jātimaraṇassa pāragā, dukkhass' antakarā bhavāma.
  - Yathāpi bhamaro pupphaṃ vaṇṇagandhaṃ aheṭṭhayaṃ  
paleti rasaṃ ādāya evaṃ gāme muṇi caro.  
Na tena bhikkhu bhavati yāvata bhikkhate pare  
vissaṃ dhammaṃ samādāya bhikkhu hoti na tāvata.
  - Manujassa pamattacārino taṇhā vaḍḍhati māluvā viya  
so palavati hurūhuraṃ phalaṃ icchati va vanasmi vā'aro.  
Yaṃ esū sahaṭṭi jammi taṇhā loke visattikā  
sokā tassa pavaḍḍhanti abhivaḍḍhaṃ va biraṇaṃ.
  - Aciraṃ vat' ayaṃ kāyo paṭhaviṃ adhisessati  
chuddo apetaṃ ānāso niratthaṃ va kaliṅgaraṃ.  
Parijñānaṃ idaṃ rūpaṃ rogaṇiḍḍhaṃ pabbhaṅgaṇaṃ,  
bhijjati pūtisaṇḍeho, maraṇantaṃ hi jīvitaṃ.
  - Apassi-m-uttinṇapadaṃ hasantiñ c' eva tāpasīṃ  
"imāya khulu bhaccā me gahitā nū" 'ti cintiya :  
"Kiṃ na passasi bhacce me bhoti tvaṃ" iti āha taṃ,  
"kiṃ rūjaputta bhaccho, piva nahāyā" 'tyāha sū.
- Write full grammatical notes on SIX of the italicized words in Question 1. 6
- Conjugate the roots of EITHER *apakkami* OR *addasāma* in aorist ; and of EITHER *ādāya* OR *bhikkhate* in present. 4
- Decline the bases of EITHER *taṇhā* OR *gopi* and of EITHER *rūpaṃ* OR *mahāmuni*, in all the cases and numbers. 6
- Expound the Samāsas in any THREE of the following :— 6  
*parappavāḍakusalo* ; *dhammavinaṇṇasāṇḍakahaṇi* ; *sattāmaccasattānugo* ;  
*Tambabhūmīrajoṇḍhā* ; *sambuddhamatakovidāni* ; *sabbābharaṇabhūsilā*.
- Frame short sentences in Pāli, using any THREE of the following particles :—*viṇa*, *nāma*, *kevalaṃ*, *vata*, *bhūyo*. 8
- Either, Explain fully, indicating the context :— 8
  - Pāliṃ āhūbhidhammassa, atthaṃ assa na so 'dhiḡa.
  - Pālimattaṃ idhēnītaṃ, n' atthi atthakathā idha.
  - Sihalo, tena sambandhā ete sabbe pi Sihala.
  - Vaggapaññāsakaṃ nāma saṃyuttaṃ ca nipātakaṃ.

Or, (a) Define a *bhikkhu* and a *brāhmaṇa* according to the *Dhammapāda*. 4

(b) Write short explanatory notes on—*ariyasaccāni*, *samikkhārū*, *āsavā*, and *Patañjali-mata*. 4

8. Either, Relate in simple Pāli the story of Kapirājacariyā. 8

Or, Give the substance of the *gūthās* of Māluṅkyāputta and Mahāpajjapati Gotami. 8

9. Either, Summarize the account of the Council of Mahākassapa. 8

Or, What are the main teachings of Buddha according to your text? 8

10. Give a short sketch of the life of either Vijaya or Buddhaghosa. 6

11. Translate into Pāli :— 25

(a) At that time a lion and a tiger lived in a mountain-cave in a forest. A jackal used to attend them and eat the meat left by them.

(b) The bodhisatta was born in a brahmin family of Benares. When he came of age, he went to Takkaśilā. On his return the king made him his family priest.

(c) The bodhisatta set out from Benares with merchandise on five hundred carts for trading purposes. On reaching the high road he called together all the traders and admonished them.

(d) Prince Dīghāvu found the king of Benares in a lonely place. He seized him and said, "Now will I cut into fourteen pieces the man who killed my father and mother."

(e) One day he found in the forest a young deer. He took it home and nourished it. He treated it as his own child. One day the deer was killed by a hunter.

## SECOND PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate any two of the following passages into English:— 25

(a) Tass' ekadivasanā mahātale nisīditvā madhuphāṇitohi khādaniyaṃ khādantassa ekaṃ madhubinduṃ ca phāṇitabinduṃ ca pūvakhaṇḍaṃ ca bhūmiyaṃ pati. Ekā pipīlikā taṃ disvā "rañño mahātale madhucāpi bhinnā, phāṇitasakaṭaṃ pūvasakaṭaṃ nikkujjitaṃ, madhuphāṇi-tapīve khādathā" ti viravanti carati. Rājā tassā ravaṃ sutvā hasi.

(b) Ath' assa ratho samuddapitthena vegena gacchanto Simbalivanaṃ pakkhanto. Tassa gamanamagge Simbalivanaṃ tālavanaṃ viya chijjivā samuddapitthe patati. Supaṇṇapotakā samuddapitthe parivattentā mahā-ravaṃ ravimsu. Sakko Mātaliṃ pucchi : "Samma Mātali, kiṃ saddo nāṃ" esa, atikaruṇo ravo vattati" ti. "Deva, tumhākaṃ rathavegavicumhile Simbalivane patante supaṇṇapotakā maraṇabhayaatajjilā okaviravaṃ viravanti" ti.

(c) Tato titthiyā "Sundariṃ na paśsamā" ti kolāhalaṃ katvā rañño ārocetvā "kahaṃ vo āsaṃkā" ti vuttā "ime divase Jetavanaṃ gatā 'ti, tatr' assa pavattirā na jānāmā" ti vatvā "tena hi gacchatha naṃ vicinathā" ti raññā anuññātā attano upaṭṭhāke gahetvā Jetavanaṃ gantvā vicinantā mālākacavarantare disvā mañcakaṃ āropetvā nagaraṃ pavesetvā "samaṇassa Gotamassa sāvakā 'Satthārā katapūpakammaṃ paṭicchādessamā" ti Sundariṃ māretvā mālākacavarantare nikkhipimsu" ti rañño ārocayimsu.

2 (a) Expound the Samāsas in any four of the italicized words in Question 1. 4

(b) Decline in the *locative case* the bases of any four of the following :—  
(i) *rañño*, (ii) *tiṭṭhiyā*, (iii) *allano*, (iv) *mañcakani*, (v) *Satthārā*, and  
(vi) *tumhākani*. 4

(c) Conjugate the roots of any two of the following :—(i) *khādantassa* in aorist, (ii) *carati* in future, (iii) *chiñjitvā* in present, (iv) *jānāma* in optative, and (v) *nikkhipiṇṇsu* in imperative. 4

3. (a) Illustrate the uses of *either* the *ablative* or the *locative case* in Pāli. 4

(b) Give the causative form of *√hū* ; the desiderative form of *√kit* ; the intensive form of *√lap* ; and the denominative verbal stem of *putta*. 4

4. *Either*, Narrate briefly in English the relevant story connected with the following verse :— 13

“Daṇḍen’eke damayanti aṅkusehi kasāhi ca  
adaṇḍena a-atthena nāgo danto mahesinā ti.”

Or, Fully explain what Buddha meant by saying—“Dve’me bhikkhave antā pabbajitena na sevitaḥhā.” 13

5. *Either*, Comment on FOUR *Pubbahmullas*, noting their bearing on the life and teaching of Buddha. 12

Or, Write notes on any THREE of the following :—(a) *saccakiriya*, (b) *Dasabala*, (c) *Dighabhūṇakā*, (d) *Paṭiccasamuppāda*, (e) *Brahmadāraṇḍa*, (f) *Bharukaccha*, (g) *Jetavana*, and (h) *Pañcavaggi*. 12

6. Translate into English *either* (a) or (b) :— 30

(a) Atīte Bodhisatto sakunayoniyaṃ nibbattitvā vayappatto sakunasaṃghaparivuto samuddamajjhe dīpake vasi. Ath’ ekacce kāsiraṭṭhavaśino vāṇijū disākākaṃ gaḥetvā nāvāya samuddaṃ pakkhandiṃsu. Samuddamajjhe nāvā bhijji. Disākāko taṃ dīpakaṃ gantvā cintesi : “ayaṃ mahāsakunasaṃgho, mayā kuhakakammaṃ katvā etesaṃ aṇḍāni c’ eva potake ca khādītum vaṭṭati” ti. So otaritvā sakunasaṃghassa majjhe mukhaṃ vivaritvā ekena pādena paṭhaviyaṃ atṭhāsi. “Ko nāma tvaṃ sūmi” ti sakunehi puṭṭho “ahaṃ Dhammiko nāmā” ti āha. “Kasmā pana ekapādena ṭhito ’si” ti. “Mayā dutiye pāde nikkhitte paṭhavi dhāretum na sakkoti” ti. “Atha kasmā mukhaṃ vivaritvā tiṭṭhasi” ti. “Mayaṃ aṇḍāni āhāraṃ na khādāma, vātaṃ eva pivāmā” ti, evaṃ ca pana vatvā te sakune āmantetvā “ovādaṃ vo dassāmi, taṃ supāṭhā” ti āha :

“Dhammaṃ caratha ṇātayo, dhammaṃ caratha, bhaddaṃ vo,  
dhammacārī sukhāṃ seti aṃhiṃ loke paramhi cā” ti.

(b) Mahodadhiṃ aparimitaṃ mahāsaraṃ bahubheravaṃ ratanagapāṇaṃ ālayaṃ |

najjo yathā macchagapāṇasaṃghasevitā puthū savanti upayanti sāgaraṃ ||

evaṃ naraṃ annadapānavatthadaṃ seyyānisajjatharaṇāssa dāyakaṃ |

puññassa dhārā upayanti paṇḍitaṃ najjo yathā vārivahā va sāgaraṃ ti ||



## ARABIC

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Translate into English, with reference to the context:— 15

فلما طاب الطعام طلب من العجوز اداء فائته به ، فجعل يصب الطبخ في الاناء وينفخه بغمه ليبرده ويلقم الصغار ، ولم يزل يفعل هكذا واحداً بعد واحد حتى اتى جميعهم وشبعوا واكتفوا وقاموا يضحكرون ويلعبون مع بعضهم الى ان غلب عليهم النوم فناموا فالتفت، عمر عند ذلك الى العجوز وقال لها يا خالة انا من قرابة امير المؤمنين عمرو ساذكر حالك فاتياني غدا صباحا دار الامارة فتجديني هناك فارجي خيراً - ثم ودعها و خرج و خرجت معه ، فقال يا عباس والله اني حين رأيت العجوز تعلل صبيتها حسست ان الجبال قد زلزلت واستقرت على ظهري حتى اذا جئت بما جئت و اطعمتهم ما طبخته لهم واكتفوا وجلسوا يلعبون و يضحكرون فحينئذ شعرت ان تلك الجبال قد سقطت ان ظهري \*

- (b) Give the root (مادة) of any five of :— 5

آتَتْ - اِلْتَفَتَ - تَجِدُنِي - اِرْجَى - اسْتَقَرَّتْ - اِكْتَفَوْا - نَامُوا

- (c) Give اتياني غدا صباحا دار الامارة of التركيب النحوي 4

(d) To what class of حروف belongs “أن” in الى ان غلب عليهم النوم , حروف in the above passage ? Give the other حروف of this class and mention the special force of each with an example.

2. Give the story of المرأة السريمة 7

3. Write in your own Arabic the story of الطبيب و الخليفة. 15

4. (a) Render into simple English :—

10

(۱)

ومن الجهالة ان تعظم جاهلا \* لصقال ملبسه ر رونق نقشه  
واعلم بان التبر في بطن الثرى \* خاف الى ان يستبين بنبشه  
ورفضيلة الدينار يظهر سرها \* من حكه لا من ملاحه نقشه

(۲)

عاب التعلم قرم لا عقول لهم \* وما عليه اذا عابوه من ضرر  
ما ضر شمس الضحى والشمس طالعة \* ان لا يرى ضئها من ليس ذا بصر

(b) Give the force of the حروف underlined in the above passages. 4

(c) To what class of nouns belongs حيث ? Give the other nouns of this class and state their grammatical characteristics. 5

5. Correct or justify any six of the following, giving reasons :— 9

(۲) تَقْرَى خَيْرُ زَاكٍ

(۱) إِنَّمَا زَيْدًا قَائِمٌ

(۴) إِن جِئْتَ فَاجِئِي

(۳) لَيْتَ الشَّبَابَ يَعُودَ

(۶) جَاءَنِي أَبَا الْفَضْلِ

(۵) جَاءَنِي امْرَأَةٌ مَالِمٌ

(۸) اشْتَرَيْتَهُ بَسْتَنَةً دِرْهَمًا

(۷) رَأَيْتُهُ غَدَا

6. Translate the following passage into Arabic :—

20

There is a well-known story that a young boy used to go out every day to take care of the cattle in the fields. This duty was very light. Once, when lying on the grass, he thought that he would play a trick on the people of the village; so he ran there calling out 'Wolf Wolf!' Villagers hastened to his help, but found no need to assist him. He did so another time, and again the villagers went to him on hearing his cry of distress. A third time this occurred, but they did not go. But it was a fact that a wolf had really come and attacked the cattle.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following passages :— 12

(a)

رب يربى العالمين بيرة \* ر ناله ابداء اليهم ر اصل  
تقصيه ر يسرق نحرل دائما \* ما لا تكون لبعضه تستاهل  
متفضل ابداء ر انت لجرده \* بقباثم العصيان منك تقابل  
و اذا دجا ليل الخطوب ر اظلمت \* سبل الخلاص ر خاب فيها الامل  
ياتيك من الطافه الفرج الذى \* لم تحتسبه ر انت عنه غافل

(b)

ولما بلوت الناس اطلب عندهم \* اخا ثقة عند اعتراض الشدائد  
تطلعت فى حالى رخاء ر شدة \* ر نديث فى الكياء هل من مساعد  
فلم ار فى ما ساء نى غير شامت \* ولم ار فى ما سرنى غير حاسد

(c)

ليس التفضل يا اخى ان تحسنا \* لأخ يجازى بالجميل من الثنا  
ان التفضل ان تجازى من اسا \* لك بالجميل ر انت عنه فى غنى  
من عبنى المرء يبدو ما يكتمه \* حتى يكون الذى يرعاه يفهمه  
ما يضم المرء يبدو من شمائله \* لمنظر فيه يهديه ترسمه

2. Answer any THREE of the following :—

15

(a) Give the صيغة and باب of any five of the following :—

يرعاه ; اسا ; تحسنا ; ار ; بلوت ; تحتسبه ; تستاهل

(b) Write notes on FIVE of the following, explaining their construction :—

ويسرق نحرل دائما ; و اذا دجا ; و انت عنه غافل ; اخا ثقة ; من  
مساعد ; يا اخى ; غير شامت

(c) Write with vowel-points the opposite numbers of FIVE of the following:—

شمائل ; عمن ; اخ ; فرج ; سبل ; ليل ; قبائم

(d) Write out with full vowel-points the THREE bayts in Question 1 (b).

3. (a) The passages in Question 1 (c) are included in the section of حكم.

Explain this word, and state whether this class of literary expression was common among the Arabs.

(b) What is meant by الجاهلية ؟ Mention a few poets belonging to it.

(c) Write an account of حسان بن ثابت.

6

4. Translate into English EITHER A or B:—

80

A

لَمَّا حَضَرَتْ سَلِيمَانَ الرَّفَاةَ دَعَا رَجَاءَ بْنَ حَيْرَةَ وَمُحَمَّدَ الزَّهْرِيَّ وَمَكْحُولًا وَغَيْرَهُمْ مِنَ الْعُلَمَاءِ مِمَّنْ كَانَ فِي عَسْكَرِهِ وَغَزَايَا وَنَافِلًا فَكَتَبَ رِصِيْدَهُ وَاشْهَدَهُمْ عَلَيْهَا وَقَالَ إِذَا أَنَا مَيِّتٌ فَأَذِّنُوا بِالصَّلَاةِ جَامِعَةً ثُمَّ اقْرَءُوا هَذَا الْكِتَابَ عَلَى النَّاسِ فَلَمَّا فَرَغَ مِنْ دَفْنِهِ نُزِدَى الصَّلَاةُ جَامِعَةً فَاجْتَمَعَ النَّاسُ فَقَامَ الزَّهْرِيُّ فَقَالَ أَيُّهَا النَّاسُ أَرْضَيْتُمْ مِنْ سَمَاءِ إِمِيرِ الْمُؤْمِنِينَ سَلِيمَانَ فَقَالُوا نَعَمْ فَقَرَأَ الْكِتَابَ فَإِذَا اسْمُ عُمَرَ بْنِ عَبْدِ الْعَزِيزِ وَمِنْ بَعْدِهِ يُزَيْدُ بْنُ عَبْدِ الْمَلِكِ فَقَامَ مَكْحُولٌ فَقَالَ أَيْنَ عُمَرُ وَكَانَ عُمَرُ فِي أَوَاخِرِ النَّاسِ فَاسْتَرْجَعَ حِينَ دَعِيَ بِاسْمِهِ مَرَّتَيْنِ أَوْ ثَلَاثًا \*

B

وَكَانَتْ وَفَاةُ صَاحِبِ الدِّينِ بَعْدَ صَلَاةِ الصُّبْحِ مِنْ يَوْمِ الرَّبْعَاءِ وَبَادِرِ الْقَاضِي الْفَاضِلِ بَعْدَ طُلُوعِ الصُّبْحِ فِي رَقَّتِ وَفَاتِهِ وَوَصَلَتْ وَ قَدْ مَاتَ وَ انْتَقَلَ إِلَى رِضْوَانِ اللَّهِ وَ مَحَلِّ كَرَمِهِ وَ جَزِيلِ ثَوَابِهِ وَ لَقَدْ حَكَى لِي أَنَّهُ لَمَّا بَلَغَ الشَّيْخُ أَبُو جَعْفَرٍ إِلَى قَوْلِهِ تَعَالَى لَا إِلَهَ إِلَّا هُوَ عَلَيْهِ تَوَكَّلْتُ تَبَسُّمٌ وَ تَهَلَّلَ وَجْهُهُ وَ سَلِمَهَا إِلَى رَبِّهِ وَ كَانَ يَوْمًا لَمْ يُصَبِّ إِلَّا سَلامٌ وَ الْمُسْلِمُونَ بِمِثْلِهِ مَنذُ فَقَدُوا الْخُلَفَاءَ الرَّاشِدِينَ وَ غَشَى الْقَلْعَةُ وَ الْبَلَدُ وَ الدُّنْيَا مِنَ الرَّحْشَةِ مَا لَا يَعْلَمُهُ إِلَّا اللَّهُ تَعَالَى وَ بِاللَّهِ لَقَدْ كُنْتُ أَسْمَعُ مِنْ بَعْضِ النَّاسِ أَنَّهُمْ يَتَمَنُّونَ فِدَاءَهُ بِنَفْسِهِمْ \*

5. Answer any THREE of the following :—

12

(a) Illustrate with examples the kinds of sentence found in Arabic, and parse according to Arabic grammar the *bayān* Question 1 (a) beginning  
بَاتِيكَ مِنَ الطَّافَةِ...

(b) Mention اقسام المفعول and give examples.

(c) Explain the meaning of حروف تنصب المضارع and exemplify their uses.

(d) What is the order of words in an Arabic sentence? Does this logic of grammar prevail in all sentences?

(e) Write in Arabic with full vowel-signs :—

The man and a son of his; six cows; Joseph and Jacob came; next week; each of us has two hands.

6. Translate into Arabic :—

25

The three philosophers set out secretly for Rome with a great quantity of gold in iron boxes. They entered the city as merchants, but all the time they were seeking a chance to bury the treasure they had brought in two separate places. At last their chance came, and they hid the gold in two old underground chambers, and then presented themselves before the emperor. 'Great Emperor of the Romans', said the first, 'we are mighty men though we do not bear arms. And in the night a spirit comes to each of us and thus do we learn many things, but especially do we know of any treasure that has lain in the ground even from ancient time.'

## PERSIAN

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### FIRST PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English :—

23

(a)

در آرزوی آب حیاتی تو هر زمان  
مانند خضر گرد جهان در دویده گیر  
نرمه و عنکبوتی و حال جهان مگس  
چون عنکبوت گرد مگس بر تنیده گیر

گیرم ترا که مال ز قارون فزون شود  
 عمرت بعر نوح پیمبر رسیده گم  
 روز پسین که هیچ نماند بجز دریغ  
 صد بار پشت دست بدندان گزیده گم  
 سعدی تو نیز ازین قفس تنگدای دهر  
 روزی قفس شکسته و مرغش پریده گم

(b)

تا بفرمن نرسد دست امیدیکه تراست  
 چاره کار بجز دیده بارانی نیست  
 گرگدای کنی از در که آنکس باره  
 که گدایان درش را سر سلطانی نیست  
 یارب از نیست بهست آمده صنع تو ام  
 و آنچه هست از نظر علم تو پنهانی نیست  
 گر برانی و گرم بنده مخلص خوانی  
 روی نویدیم از حضرت سبحانی نیست  
 نا امید از در لطف تو کجا شاید رفت  
 تو ببغشای که درگاه ترا ثانی نیست

2. (a) Explain the allusion in the first line of extract (a) in Question 1. 3

(b) Epound the metaphor in the first line of extract (b) in Question 1. 4

3. Explain fully any two of the following in Persian:— 10

(a)

بر در غار که گذار تو بود  
 وز طلب خصم حصار تو بود  
 تا نه رسد زخم ز اهل خلاف  
 آمدت این بیضه گر آن درع باف

(b)

جامی اگر نقد کمالیت هست  
 در حجب غیب جمالیست هست  
 بر بصر اهل نظر جلوه ده  
 در نظر بی بصافت

(c)

جهان زخاٹ خرابست بر گذر گاه سيل

کمان مبر که بیک مشت گل شود معمر

4. (a) Give in your own words the story of:—

4

either حکایت زنده دل که با مردگان انس گرفته بود

or حکایت یعقوب پیغمبر در فراق یوسف

(b) Explain with reference to the context:—

4

پیش عیسی آن خم آمد در سخن

گفت ای عیسی مذم مرد کهن

زیر این نه کاسه من باره هزار

گشته ام هم کوزه هم خم هم تفرار

گر کنندم خم هزاران بار نیز

نیست جز تلخی مرگم کار نیز

دائم از تلخی مرگم این چنین

آب من زانست ناشیرین چنین

5. (a) Explain the force of *که* in the following lines:—

5

خبرت هست که مرغان چمن می گویند

کآخر ای خفته سراز بالش غفلت بردار

هر که امروز نه بیند اثر قدرت او

غالب آنست که فرداش نه ببیند دیدار

که تواند که دهد میوه رنگین از چوب

یا که داند که بر آرد گل صد برگ از خار

وقت آنست که داماد گل از حلقه غیب

بدر آید که درختان همه گردند نثار

(b) Form sentences to illustrate the different uses of *از*.

8

6. (a) Write down etymological notes on any six of the following:—6

تذمذم - مرود - خیابان - دزدیش - نوشیران - بو الفضول - ناخدا - آفتاب

(b) Form words by the following suffixes and use them in short sentences.—

6

وش - رو - ناک - آکین - گون - گاه

## 7. Translate into Persian :—

25

The celebrated poet Nizāmī of Ganjah who died in the year 576A.H., assures us that he compiled his *Sikandarnāma* or 'History of Alexander' from Jewish, Christian, and Pahlavi records ; by which we may suppose him to mean Hebrew, Greek, or Latin, and old Persian manuscripts. He informs us that the Macedonian hero, having espoused Rūshang or Roxana, the daughter of Darius, and proceeded (from Isfahān) to Istakhr, there placed on his head the imperial crown, in the place of Kayumars and of Kaiqubād.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## 1. Translate into English :—

20

## A

آورده اند که روباهی در بیشه می رفت و بپوی طعمه هر طرف می گشت - بجای درختی رسید که طبعی از پهلوی آن آویخته بودند - و هرگاه بادی بوزیدی شاخی از آن درخت در حرکت آمده بر روی طبل رسیدی و آواز سهگین از آن برآمدی روباه بزیر درخت مرغی خانگی دید که منقار در زمین می زد و قوتی می طلبید - در کمین نشسته خواست که او را صید نماید که ناگاه آواز طبل بگوش او رسید - نگاه کرد چنانکه دید بغایت فربه و آوازی مهیب استماع افتاد - طمع روباه در حرکت آمده با خود اندیشید - که هر آئینه گوشت و پوست او فراخور آواز خواهد بود - از کمین مرغ بیرون آمد و روی بدرخت نهاد \*

## B

نام سلطان محمود غزنوی در اطراف آفاق دایره و ربع او در قلوب رضیع و شریف ساری و سائر گشت - در آن اوقات القادر بالله خلیفه بغداد بود - محمود نسبت بوی اظهار ارادت می نمود - قادر خلیفه نیز دوستی چنین کس را فوزی عظیم دانسته او را بر نشر احکام و اعتلای اعلام دین محمدی ترغیب نمود - و او را یمین الدولة و امین الملة لقب داد - محمود نیز عهد کرد که ما دام الحیات در خدمت شریعت از پای ننشیند و شمشیر در نیام نکند - پس از آنکه بدوستی خلیفه مستظهر گشت - و بند و بست حکومت خراسان و ری نمود بخترا ایلخان پادشاه ترکستان را بعباله ازدواج آورد \*

2. Give a short account of the life and career of Nādir Shāh, following closely the narrative given in your Persian text. 9

3. Write short notes on any three of the following :—Yazdagird-i-Athim, Shāpūr-Dhu-l-Aktāf, Farīdūn, Maḥmūd of Ghaznā, and Bahrām Gur 6



## 4. Translate into English any two of the following :—

35

## A

حاتم را پرسیدند که هرگز از خود کریمتری ددی گفت بای روزی در خانه غلامی بنام فرود آمدم و ری ده سر گوسفند داشت فی الحال یک گوسفند بکشت و بخت و پیش من آورد مرا قطعاً از ری خوش آمد بخوردم<sup>۱۰</sup> و گفتم و الله این بسی خوش بود - آن غلام بیرون رفت و یک یک گوسفند را می کشت و آن موضعی را بخت و پیش من آورد و من از آن آگاه نی چون بیرون آمدم که سوار شوم دیدم که بیرون خانه خون بسیار ریخته است پرسیدم که این چیست گفتند ری همه گوسفندان خود را کشت \*

## B

آورده اند که زاهدی مهمان پادشاهی بود چون بطعام بنشستند کمتر از آن خورد که ارادت او بود و چون بنماز برخاستند بیشتر از آن کرد که عادت او بود تا ظن صلاح در حق او زیادت کنند چون بغانه باز آمد سفره خواست تا تناول کند پسری داشت صاحب فراست گفت ای پدر بدعوت سلطان بودی طعام نخوردی گفت در نظرایشان چیزی نخوردم که بکار آید گفت نماز هم قضا کن که چیزی نکرنی که بکار آید \*

## C

مرا در نظامیه ادرار بود \* شب و روز تلقین و تکرار بود  
 مرا استادرا گفتم ای پدر خرد \* فلان یار بر من حسد می برد  
 چو من داد معنی دهم در حدیث \* بر آید بهم اندرون خبیث  
 شنید این سخن پیشترای ادب \* به تندی بر آشفت و گفت ای عجب  
 حسودی پسندت نیاید ز دوست \* ندانم که گفت که غیبت نکوست  
 گر او راه دوزخ گرفت از خسی \* از این راه دیگر تو در ری رسی

## 5. Turn the following into the imperative mood :—

5

نشستن - نوشتن - خفتن - دیدن - آویختن

## 6. Translate into Persian :—

25

When Adam and Eve were cast forth from Paradise, say Arabian traditionists, they fell in different parts of the earth; Adam on a mountain in the island of Ceylon, Eve in Arabia. For two hundred years they wandered separate and lonely. After this they came together on mount 'Arafāt. Adam raised his hands and eyes to heaven and implored the mercy of God.

## LATIN

*l'aper-setters*— { MR. W. C. WORDSWORTH, M.A.  
 „ NALINIMOHAN CHATTERJEE, M.A.

*Examiners*— { MR. NALINIMOHAN CHATTERJEE, M.A.  
 { REV. FATHER V. VERBOCKHAVEN, S.J.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## 1. Translate into English:—

Sic enim mihi perspicere videor, ita natos esse nos, ut inter omnis esset societas quaedam, maior autem, ut quisque proxime accederet. Itaque cives potiores quam peregrini, propinqui quam alieni; cum his enim amicitiam natura ipsa peperit, sed ea non satis habet firmitatis. Namque hoc praestat amicitia propinquitati, quod ex propinquitate benevolentia tolli potest, ex amicitia non potest; sublata enim benevolentia amicitiae nomen tollitur, propinquitatis manet. Quanta autem vis amicitiae sit ex hoc intellegi maxime potest, quod ex infinita societate generis humani, quam conciliavit ipsa natura, ita contracta res est et adducta in angustum, ut omnis caritas aut inter duos aut inter paucos iungeretur.

10

2. *Either*, Appreciate Cicero as a writer of philosophy.

10

*Or*, Form an estimate of friendship after Cicero.

## 3. Translate into English:—

10

Atque etiam mihi quidem videntur, qui utilitatis causa fingunt amicitias, amabilissimum nodum amicitiae tollere. Non enim tam utilitas parta per amicum quam amici amor ipse delectat, tumque illud fit, quod ab amico est profectum, iucundum, si cum studio est profectum. Tautumque abest ut amicitiae propter indigentiam colantur, ut ei, qui opibus et copiis maximeque virtute, in qua plurimum est praesidi, minime alterius indigeant, liberalissimi sint et beneficentissimi. Atque haud sciam an ne opus sit quidem nihil umquam omnino deesse amicis. Ubi enim studia nostra viguissent, si numquam consilio, numquam opera nostra nec domi nec militiae Scipio eguisset? Non igitur utilitatem amicitia, sed utilitas amicitiam secuta est.

4. *Either*, What may be learnt from Cicero's writings of his personal and political ideals and their relation to his friendships?

10

*Or*, What do you know of—Atticus, Scipio Africanus the younger, Laelius, and Scaevola the augur?

## 5. Translate into English:—

20

(a) Ille autem: 'neque te Phoebi cortina fefellit,  
 dux Anchisiada, nec me deus aequore mersit.  
 namque gubernaculum, multa vi forte revulsum,  
 cui datus haerebam custos, cursusque regebam,  
 praecipitans traxi mecum. maria aspera iuro,  
 non ullum pro me tantum cepisse timorem,  
 quam tua ne, spoliata armis, excussa magistro,  
 deficeret tantis navis surgentibus undis.  
 tres Notus hibernas immensa per aequora noctes  
 vexit me violentus aqua: vix lumine quarto  
 prospexi Italiam, summa sublimis ab unda.

paullatim adnabam terrae: iam tuta tenebam;  
 ni gens crudelis madida cum veste gravatum,  
 prensantemque uncis manibus capita aspera montis,  
 ferro invasisset, praedamque ignara putasset,  
 nunc me fluctus habet, versantque in litore venti'.

- (b) His demum exactis, perfecto munere divae,  
 devenere locos laetos, et amoena vireta  
 fortunatorum nemorum, sedesque beatas.  
 largior hic campos aether et lumine vestit  
 purpureo; solemque suum, sua sidera, norunt.  
 pars in gramineis exercent membra palaestris;  
 contendunt ludo, et fulva luctantur arena;  
 pars pedibus plaudunt choreas, et carmina dicunt.  
 nec non Threicius longa cum veste sacerdos  
 obloquitur numeris septem discrimina vocum;  
 iamque fidem digitis, iam pectine pulsat eburno.  
 hic genus antiquum Teucris, pulcherrima proles,  
 magnanimi heroes, nati melioribus annis,  
 Ilusque, Assaracusque, et Troiae Dardanus auctor.  
 arma procul, currusque virum miratur inanes.  
 stant terra defixae hastae, passimque soluti  
 per campos pascuntur equi.

6. *Either*, Narrate briefly the incidents of the sixth book of the *Aeneid*. 10

Or, Compare the *Aeneid* with any other epic poem known to you.

7. Translate, and explain the allusions in, the following:— 10

(a) Qui clamores tota cavea nuper in hospitibus et amici mei M. Pacuvi nova fabula, cum ignorante rege uter Orestes esset, Pylades Orestem se esse diceret, ut pro illo necaretur, Orestes autem, ita ut erat, Orestem se esse perseveraret!

(b) Quo fessum rapitis, Fabii? tu Maximus ille es,  
 unus qui nobis cunctando restituis rem.

8. State the different ways in which adverbs are formed from adjectives, with illustrative examples. 6

9. Show by examples the constructions used with—*libet, decet, poenitet, coram, interest, obsum, frugi, forsan*. 8

10. Translate:—*nescio quis adest; nescio quis adsit; vereor ut hoc facere possis; vereor ne hoc faciat; hoc facit ne quis exire possit; hoc facit ut nemo exire possit*. 6

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate:—

60

- (a) *Mars, the god of war, the reputed father of Romulus, wants his son in heaven. He prays Jupiter to allow this, and Romulus disappears in a thunderstorm.*

Nam pater amipotens postquam nova moenia vidit,  
 multaque Romulea bella peracta manu;  
 'Jupiter,' inquit 'habet Romana potentia vires,  
 sanguinis officio non eget illa mei.

redde patri natum: quamvis intercidit alter,  
 pro se proque Remo, qui mihi restat, erit.  
 unus erit, quem tu, tolles in caerula coeli:  
 tu mihi dixisti, sint rata dicta Iovis.  
 Iupiter annuerat. Nutu tremefactus uterque  
 est polus, et coeli pondera movit Atlas.  
 est locus; antiqui Capreae dixere paludem;  
 forte tuis illic, Romule, iura dabas.  
 sol fugit, et removen<sup>t</sup> subeuntia nubila coelum;  
 et gravis effusus decidit imber aquis.  
 hinc tonat: hinc missis abrumpitur ignibus aether;  
 fit fuga; rex patriis astra petebat equis.  
 Romuleus: *an adjective from Romulus.*

- (b) *Caesar reforms the Calendar—making the year 365½ days + 1 in leap year.*

Sed tamen errabant etiam tunc tempora; donec  
 Caesaris in multis haec quoque cura fuit.  
 non haec ille deus tantaeque propaginis auctor  
 credidit officiis esse minora suis:  
 promissumque sibi voluit praeposcere caelum;  
 nec deus ignotas hospes inire domos.  
 is decies senos tercentum et quinque diebus  
 iunxit: et e pleno tempora quarta die.  
 hic anni modus est. In lustrum accedere debet,  
 quae consummatur partibus, una dies.

- (c) *Caesar's first expedition to Britain.*

His constitutis rebus nactus idoneam ad navigandum tempestatem tertia fere vigilia solvit equitesque in ulteriorem portum progredi et naves conscendere et se sequi iussit a quibus quum paulo tardius esset administratum ipse hora circiter diei quarta cum primis navibus Britanniam attigit atque ibi in omnibus collibus expositas hostium copias armatas conspexit.

- (d) *The battle of Marathon. The Persians defeated by the Athenians, in spite of the failure of the Spartans (Lacedaemonii) to come in time.*

Datis, etsi non aequum locum videbat suis, tamen fretus numero copiarum suarum configere cupiebat, eoque magis, quod, priusquam Lacedaemonii subsidio venirent, dimicare utile arbitrabatur. Itaque in aciem peditum centum, equitum decem milia produxit proeliumque commisit. In quo tanto plus virtute valuerunt Athenienses, ut decemplicem numerum hostium profigarint adeoque perterruerint, ut Persae non castra, sed naves petierint. Qua pugna nihil adhuc est nobilius. Nulla enim tam exigua manus tantas opes prostravit.

2. Translate into Latin:—

40

(a) As Hannibal was in difficulties for want of supplies, he determined to march south without delay in hope of finding allies who would supply his army's needs and furnish an asylum for the winter.

(b) The careful husbandman plants trees though he may never see their fruit. If all behaved in this fashion the world would be happier.

(c) He was a man of great eloquence, but what he had to say was always less attractive than the way he said it.

(d) Slowly they coasted along Sicily until in the distance they saw the ships of the Carthaginians, when they turned towards them and prepared for battle.

(e) We should use our time wisely when we are young, that when old we may have the satisfaction of knowing that we have done the best with our lives.

(f) On hearing this, Cassius abandoned his attempt, fearing that he might be cut off from the city unless he set out at once.

(g) He said that he had not given any such commands.

## FRENCH

*Paper-setters and Examiners* — { Mr. NAGEENDRANATH CHANDRA, M.A.  
Rev. FATHER E. POPULAIRE, S.J.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any THREE of the following passages:—24

(a) L'Étude qui commença comme à l'ordinaire à cinq heures et demie, après une interminable récréation, fut d'une tristesse mortelle. Nous n'étions que six au quartier, le maître compris, en réunissant les retardataires des trois divisions. La salle, veuve de tous ses habitants, avait un air lugubre, et tous ces pupitres, avec ces noms gravés en creux dans le bois, blanc sur noir, me faisaient l'effet d'autant de pierres tumulaires.

(b) Et nous nous envolions sur les deux bords de la route, au gré des préférences et des amitiés. C'est là qu'on échangeait, tout en marchant, les confidences intimes, qu'on se disait sa pensée tout entière sur la vie, sur les hommes, et sur les choses. C'est là que le professeur était analysé, le censeur censuré, le proviseur disséqué, et les petits camarades bien arrangés; c'est là qu'on causait de tout, spécialement de tout ce qu'on ne savait pas avec l'assurance d'un âge qui ne connaît pas d'obstacles.

(c) Or, ces vapeurs dont je vous parle, venant à passer du côté gauche où est le foie, au côté droit où est le cœur, il se trouve que le poumon, que nous appelons en latin *arnyan*, ayant communication avec le cerveau, que nous nommons en grec *nasmus*, par le moyen de la veine cave, que nous appelons en hébreu *cubile*, rencontre en son chemin les dites vapeurs . . . comprenez bien ce raisonnement, je vous prie, et parce que les dites vapeurs ont certaine malignité . . . écoutez bien ceci, je vous conjure.

(d) Comment! c'est un homme qui fait des miracles. Il y a six mois qu'une femme fut abandonnée de tous les autres médecins: on la tenait morte, il y avait déjà six heures, et l'on se disposait à l'ensevelir, lorsqu'on fit venir de force l'homme dont nous parlons. Il lui mit, l'ayant vue, une petite goutte de je ne sais quoi dans la bouche; et, dans le même instant, elle se leva de son lit, et se mit aussitôt à se promener dans sa chambre comme si de rien n'eût été.

*Lucas.*—Ah!

*Valère.*—Il fallait que ce fût quelque goutte d'or potable.

2. Write notes on:— (a) *petit bonhomme*; (b) *d'écrire chacun votre nom*; (c) *ce n'est jamais de refus*; (d) *Racines de Lancelot*. 12

3. Either Justify the title given by Molière to his comedy *Le Médecin malgré lui*. 14

Or, Write a short note on the character of Jacqueline in Molière's play *Le Médecin malgré lui*.

4. Conjugate in full the verb  *falloir* . 6

5. Explain in full the ways of forming the feminine of adjectives of quality in French. 14

6. Translate into French ONE of the following passages:— 30

(a) It was only in 1920 that Japan and Turkey for the first time exchanged ambassadors. But since then Japan has sent her emissaries,

private and official, to be thoroughly *en rapport* with the successful revolt of Mustapha Kemal against his ancestors' capitulations. These capitulations in law and in spirit are now ended. Turkey is no longer the 'sick man' of Europe, but the champion of Western Asia, just as Japan is the champion of Eastern Asia.

(b) We leave the French territory over the new road from Angkor, Asia's most splendid ruin, feeling that in humanitarian and economic development the interests of the people have been furthered and respected by the French to a surprising degree. The splendid industrial public works and enterprises have been carried out with real thought for the happiness of the natives. Yet the hold of the white benefactor and ruler impresses us as very insecure to-day.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English ONE of the following passages :— 20

(a) À la fin de juillet, les villages sont vides.  
Depuis longtemps déjà des nuages livides,  
Menaçant d'un prochain orage à l'occident,  
Conseillaient la récolte au laboureur prudent.  
Donc, voici la moisson, et bientôt la vendange :  
On aiguise les faux, on prépare la grange,  
Et tous les paysans, dès l'aube rassemblés  
Joyeux, vont à la fête opulente des blés.  
Or, pendant tout ce temps de travail, les aïeules  
Au village devant les portes, restent seules,  
Se chauffant au soleil et branlant le menton,  
Calmes, et les deux mains jointes sur leur bâton,  
Car les travaux des champs leur ont courbé la taille.

(b) Enfant, j'ai traversé plus d'un fleuve à la nage,  
Ravi sa dure écorce à plus d'un houx sauvage,  
Et sur les chênes vertes, de rameaux en rameaux,  
Visité dans leurs nids les petits des oiseaux . . .  
Oh ! lorsqu'après deux ans de poignantes douleurs  
Je revis ma Bretagne et ses genêts en fleurs,  
Lorsque, sur le chemin, un vieux pâtre celtique  
Me donna le bonjour dans son langage antique,  
Quand, de troupeaux, de blés ainsi causant tous deux,  
Vinrent d'autres Bretons avec leurs long cheveux,  
Oh ! comme alors pareils au torrent qui s'écoule,  
Mes songes les plus frais m'inondèrent en foule !  
Je me croyais enfant, heureux comme autrefois,  
Et, malgré moi, mes pleurs étouffèrent ma voix.

2. Give the English equivalents for—(a) *défense d'afficher*, (b) *ne pas se pencher dehors*, (c) *entrée interdite*, (d) *gare au chien*, (e) *tenez la droite*, (f) *s'adresser au concierge*, (g) *prière de ne pas marcher sur le gazon*, (h) *sortie*, (i) *appartement à louer*, (j) *il est défendu de traverser la voie ferrée*. 10

3. Translate into English ONE of the following passages :— 20

(a) La grand'messe est terminée et l'antique église se vide. Dehors, dans le cimetière, parmi les tombes, les assistants se répandent. Et toute

la joie d'un midi ensoleillé les accueille, au sortir de l'église sombre. Recoiffés tous de l'uniforme béret national, les hommes descendent par l'escalier extérieur; les femmes sortent en groupes tout noirs par les portiques d'en bas; autour d'une fosse fraîchement fermée, quelques-unes s'attardent et pleurent. Le vent du sud qui est le grand magicien du pays basque souffle doucement. L'automne d'hier s'en est allé et on l'oublie. Des haleines tièdes passent dans l'air, vivifiantes, plus salubres que celles de mai, ayant l'odeur du foin et l'odeur des fleurs. Deux chanteuses des grands chemins sont là adossées au mur du cimetière, et entonnent avec un tambourin et une guitare une vieille chanson d'Espagne.

(b) Je me souviens qu'étant à la campagne, j'eus un exemple de ces petites pertes qu'un ménage est exposé à supporter par sa négligence. Faute d'un loquet, la porte d'une basse-cour qui donnait sur les champs se trouvait souvent ouverte. . . . Un jour, un jeune et beau porc s'échappa et gagna les bois. Voilà tous les gens en campagne: le jardinier, la cuisinière, la fille de basse-cour sortirent, chacun de leur côté, en quête de l'animal fugitif. Le jardinier fut le premier qui l'aperçut, et, en sautant un fossé pour lui barrer le passage, il se foula le pied, ce qui le retint plus de quinze jours dans son lit. La cuisinière trouva brûlé le linge qu'elle avait abandonné près du feu pour le faire sécher; et la fille de basse-cour ayant quitté l'étable sans se donner le temps d'attacher les bestiaux, une des vaches, en son absence, cassa la jambe d'un poulain qu'on élevait dans la même écurie.

4. Write out the following sentences, putting prepositions in the blank spaces. Underline the prepositions:— 10

- (a) Je vous félicite — tout mon cœur — votre succès.
- (b) Il est allé — Japon et ne reviendra que — trois ans.
- (c) Il y a un moulin — vent — l'autre côté.
- (d) Il sauta — joie et jeta son bonnet — la haie.
- (e) Il est ingrat — tout le monde et n'est aimé — personne.

5. Give the French for—What is he doing? What are you thinking of? What is that? Tell me what it is. I do not know what to do. What book is he reading? What is yours is mine. What is this house built of? What is your name? What! You are tired already! 10

6. Translate into French:— 80

(a) What a beautiful morning! Let us go for a picnic in the woods! I know a delightful spot where we can rest in the shade of the trees, and enjoy ourselves. There are plenty of twigs to make a fire with, and near by there is a brook from which we can draw water to make tea. It would be a good idea to take the dog with us in case we see some rabbits. I am told that the farmer will allow anyone to catch them, because they harm his crops. I am looking forward eagerly to a most pleasant day. When will you be ready to start? We certainly ought to be there by half past ten, and we can get a train in half an hour's time. Let us hurry up!

(b) It is always better to have friends than enemies. A Chinese Emperor had many enemies among his subjects. They declared war against the Emperor and a large army entered the city. The Emperor told the members of his court that he was going to destroy all his enemies, and walked out to meet the insurgents (*insurgés*). To the surprise of everybody, he offered to pardon them all and promised to treat them well in the future. Many of them entered the Emperor's household. The old ministers were very astonished and said: 'But you declared that you would destroy all your enemies!' 'Yes', replied the Emperor, 'and I have done so. I have no longer any enemies: they are now my friends.'

# GERMAN

Paper-setters— { DR. STELLA KRAMRISCH, PH.D.  
 PROF. HASAN SHAHID SUHRAWARDY, B.A. (OXON.)

Examiner—DR. STELLA KRAMRISCH, PH.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

10

(a) Im tollen Wahn hatt'ich dich einst verlassen,  
 Ich wollte gehn die ganze Welt zu Ende,  
 Und wollte sehn, ob ich die Liebe fände,  
 Um liebevoll die Liebe zu umfassen.  
 Und immer irrte ich nach Liebe, jimmer  
 Nach Liebe, doch die Liebe fand ich nimmer,  
 Und kehrte um nach Hause, Krank und trübe.  
 Doch da bist du entgegen mir gekommen,  
 Und ach! was da in deinem Aug'gesch wommen,  
 Das war die süsse, langgesuchte Liebe.

(b) Im Walde wandl'ich und weine,  
 Die Drossel sitzt in der Höh';  
 Sie springt und singt gar feine :  
 Warum ist dir so weh?  
 'Die Schwalben, deine Schwestern,  
 Die können's dir sagen, mein Kind;  
 Sie wohnen in klugen Nestern,  
 Wo Liebchens Fenster sind.'

10

2. Explain and illustrate with one example in English the meaning of Heine's words which he wrote to his friend Moser—'Ich kann meine eigenen Schmerzen nicht erzählen, ohne dass die Sache komisch wird.'

20

3. Translate the following with reference to the context :—

10

Und sieh! und sieh! an weisser Wand,  
 Da kam's hervor, wie Menschenhand;  
 Und schrieb, und schrieb an weisser Wand  
 Buchstaben von Feuer, und schrieb und schwand.

4. (a) Give the past form in second person plural, the past participle and imperative second person singular of: Waschen, Gehen, Essen, Verbringen, Tragen.

(b) Give the dative singular and genitive plural of: Last, Liebe, Berg, Frau, Rad, Kind, Buch, Heud, Vergnügung, Eifersucht, Sturm, Drang.

20

5. Translate into German :—

30

Peace I leave with you, my peace I give unto you: not as the world giveth, give I unto you. Let not your heart be troubled, neither let it be afraid. Ye have heard how I said unto you, I go away, and come again unto you. If ye loved me, ye would rejoice, because I said, I go unto you. If ye loved me, ye would rejoice, because I said, I go unto the Father: for my Father is greater than I. And now I have told you before it come to pass, that when it is come to pass, ye might believe. Hereafter I will not talk much with you. . . . Arise, let us go hence.



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :— 25
  - (a) Und mich ergreift ein längst entwöhntes Sehnen  
Nach jenem stillen, ersten Geisterreich,  
Es schwebt nun in unbestimmten Tönen  
Mein lispelnd Lied, der Äolsharfe gleich,  
Ein Schauer fasst mich, Träne folgt den Tränen,  
Das strenge Herz es fühlt sich mild und weich;  
Was ich besitze, seh' ich wie im Weiten,  
Und was verschwand, wird mir zu Wirklichkeiten.
  - (b) Von dem Dome,  
Schwer und bang,  
Tönt die Glocke  
Grabgesang.  
Ernst begleiten ihre Trauerschläge  
Einen Wanderer auf dem letzten Wege.
2. Give a short account in German of the changes now taking place in the German Reich.
3. Translate into English :— 20

Wohnstube. Es ist später Abend. Die Lampe, mit Schirm, steht mitten auf dem Tische. R. steht am Tische und packt einige Kleinigkeiten in einen Reisesack. Ihr Mantel. Hut und der weisse Wollschal liegen über der Sofalehne. Madam H. kommt von rechts :

Madam H. (spricht mit gedämpfter Stimme und scheint zurückhaltend): Die ganzen Sachen wären jetzt heraus getragen, Fülein. Sie stehen auf dem Küchenfluer.

R: Gut, Der Kutscher ist doch bestellt?

Madam H. Ja. Er fragte, wenn er mit dem Wagen hier sein sollte.

R. Ich denke, so gegen elf Uhr. Das Dampfschiff geht um Mitternacht.

Madam H. (ein wenig zögernd): Und der Herr Pastor? Wenn er nun nicht bis dahin nach Hause kommt?

R: Deshalb reise ich doch. Sollte ich ihn nicht mehr sehen, so können Sie ihm sagen, ich würde ihm schreiben. Einen langen Brief. Sagen Sie das.
4. Expand in your own German the following :— 25

Stay, stay at home my heart, and rest;  
Home-keeping hearts are happiest,  
For those that wander they know not where  
Are full of trouble and full of care;  
To stay at home is best.

## BENGALI

(FOR FEMALE CANDIDATES)

Paper-setters— { PROF. KHAGENDRANATH MITRA, RAI BAHADUR, M.A.  
 MR. SYAMAPRASAD MOOKERJEE, M.A., B.L.,  
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Examiner—MR. JOGENDRANATH GUPTA

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English EITHER of the following passages :— 15

(a) কৌশল্যা বলেন রাম কি বলে লক্ষ্মণ ।  
 বিমাতার বাক্যে তুমি কেন যাবে বন ॥  
 এক সত্য পালহ পিতার অঙ্গীকার ।  
 ভরতের তরে দেহ সব রাজ্যভার ॥  
 অশ্রু সত্য পালিতে নাহিক প্রয়োজন ।  
 দেশে থাক রাম তুমি না যাইও বন ॥  
 মায়ের বচন লজ্জি' পিতৃবাক্য ধর ।  
 পিতা হইতে মাতা তব অতি মহন্তর ॥  
 বাপের বচন রাখ, লজ্জ মাতৃবাণী ।  
 কোন শাস্ত্রে হেন কথা কোথাও না শুনি ॥

(b) এ স্থখ সম্পাদ্ হায় !  
 অবহেলি' সমুদায়,  
 কোথা যাও মহামতি ! কি স্থখ লভিতে ?  
 কি কাজ রয়েছে বাকি,  
 এ জগতে হ'ল না কি ?  
 যাও তাই বিভূ-আজ্ঞা যতনে পালিতে ?  
 সে দেশে কি ধনহীন  
 ডাকিছে কাকাল দীন ?

স্বরাগ্নে যেতেছ তাই করিতে সাধনা ?

রোগার্ন্ত ঔষধ পাবে, °

স্বধার্ন্ত আনন্দে খাবে,

তোমাতে ডাকিছে বুঝি, বিলম্ব ক'রো না !

2. Explain any THREE of the following passages with reference to the context :—

18

(a) বিষাদে নিঃশ্বাস ছাড়ি' কহিলা সুরখী  
লঙ্কেশ ;—“বিধির বিধি কে পারে খণ্ডাতে ?  
বিমুখী অমর-মরে, সমুখ সমরে  
বধিহু যে রিপু স্মামি, বাঁচিল সে পুনঃ  
দৈববলে ? হে সারণ ! মম ভাগ্যদোষে  
'ভুলিলা স্বধর্ম আজি কৃতান্ত আপনি ।”

(b) —“দোষ তব” —সুখিলা সরমা,  
মুছিয়া নয়ন-জল—“কহ কি, রূপসি ?  
কে ছি'ড়ি' আনিল হেথা এ স্বর্ণ-ব্রততী,  
বঞ্চিয়া রসালরাজে ? কে আনিল তুলি'  
রাঘব মানস-পদ্ম এ রাক্ষস-দেশে ?”

(c) এত ভোরে কোন্ পাখি !  
গাহিছ আকাশে থাকি,  
জাগাইয়া ধরাতল, মাতাইয়া কবি ?  
মধুর কাকলী মুখে  
খেলিছ মনের স্বখে,  
হেরি ও-মাধুরী, মরি ! নয়ন জুড়ায় ।  
সুনীল গগন-কোলে  
কাঞ্চনের ফোঁটা দোলে—  
সজীব কুসুম যেন পবনে উড়ায় ।

(d) ব্যথিয়ে' উঠে নীপের বন  
পুলক-ভরা ফুলে ।

উছলি' উঠে কল-রোমন -

অদীর কূলে কূলে।

এসো' হে এসো হৃদয়-ভরা

এসো হে এসো পিপাসা-হরা

এসো হে আখি নীতল-করা

ঘনায়' এসো মনে॥

(e) আমার লাগে নাই সে সুর, আমার

বাঁধে নাই সে কথা,

শুধু প্রাণেরই মাঝখানে আছে

গানের ব্যাকুলতা।

আজো কোটে নাই সে ফুল, শুধু

ব'হেছে এক হাওয়া।

3. *Either*, Reproduce in your own words Satyendra Nath Dutt's prophecy about the future of the Bengalis contained in the concluding lines of *আমরা*। 9

*Or*, Describe briefly the qualities which constitute, according to Sir Asutosh Mookerjee, the greatness of Michael Madhusudan Dutt as a poet. 9

4. Amplify the idea contained in the following lines:— 8

আমারে যেন না করি প্রচার

আমার আপন কাজে;

তোমারি ইচ্ছা করো হে পূর্ণ

আমার জীবন মাঝে।

5. Re-write the following, correcting all errors:— 7

আমি আগত কল্যাণিশেষে সপ্ন দেখিলাম যে আমরা ভূ-পর্বাটনে বহির্ভূত হইয়াছি। অত্যাধিক শারিরীক পরিশ্রমে আমাদের অনেকেই অসামর্থ্য হইয়া পতিত হইয়াছেন। তাহাতে আবার অর্থের ভীষণ অনাটন হেতু আমরা আর বহুদূর অগ্রশর হইতে অসক্ত হইলাম। আবশ্যকীয় খাদ্যাদীরও অভাব ঘটিল। এমন সময় আমাদের ভ্রাতাগণ ও অধীনস্থ কর্মচারীগণ আমাদের সাহায্যার্থ উপনিত হইলেন।

6. (a) Substitute a single word for each of the following phrases :— 6

যাহা পূর্বে ছিল ( এখন নাই ) ; যাহা সহজে ভাবিয়া যাইতে পারে ;  
যাহা করিতে অধিক আয়াস স্বীকার করিতে হয় না ; যে বনে থাকে ; যে  
নেশা করিতে অভ্যস্ত ! যাস কাটা যাহার কার্য্য ।

(b) Name and expound the *samāsas* in : — 6

মলয়জলীতলা, অক্লিষ্টকর, সপত্নী, সজ্জাতি, নিকড়ে, আগাছা ।

(c) Construct a sentence using each of the following words :— 6

ধূলিসাৎ, গলদশ, হৃদরপরাহত, দ্যুতিমান, বেগতিক ।

7. Translate into English :— 25

*Either,*

আমাদিগের দেশে প্রাচীন কালে অনেক সুশিক্ষিতা রমণী ছিলেন বলিয়া  
উল্লেখ আছে । শাস্ত্রকারেরাও বলিয়াছেন যে পুত্র কন্যা উভয়কেই সমান যত্নে  
লেখা পড়া শিখাইতে হইবে । কিন্তু বেথুন যখন এদেশে আসেন, সে সময়ে  
এদেশের বালিকাদিগের শিক্ষা-বিধানের অব্যবস্থা ছিল না । তিনি এই অভাব  
দূর করিবার নিমিত্ত প্রাণপণে যত্ন করিয়াছিলেন । তিনি বালিকাদিগের জ্ঞান  
কলিকাতায় নিজ বায়ে একটি বিদ্যালয় স্থাপন করিয়াছিলেন । এই বিদ্যালয়ের  
ছাত্রীদিগকে তিনি নিজের কন্যার ন্যায় ভালবাসিতেন । তিনি তাহাদিগকে  
মূল্যবান ক্রীড়া-সামগ্রী উপহার দিতেন এবং স্বয়ং তাহাদের লেখাপড়ার তত্ত্বাবধান  
করিতেন ।

*Or,*

১৮৫৪ খৃষ্টাব্দে কৃষিয়ার সঙ্গে ইংলণ্ড ও ফ্রান্সের যুদ্ধ বাধিয়া গেল ।  
ইংরাজেরা সে সময়ে যুদ্ধের জ্ঞান প্রস্তুত ছিলেন না : তাড়াতাড়ি কিছু সৈন্য  
সংগ্রহ করিয়া তাহাদিগকে যুদ্ধক্ষেত্রে পাঠানো হইল । তাহাদের চিকিৎসার  
জ্ঞান বিশেষ কোনও ব্যবস্থা করিবার সময় হইল না । ইহার ফলে এই হইল যে,  
চারিদিকে অত্যন্ত বে-বন্দোবস্ত দেখা দিল । এমন কি, রক্ত ও আহত সৈন্যগণ  
ঔষধ-পথ্য ও চিকিৎসার অভাবে দলে দলে মরিতে লাগিল । সে সময়ের অবস্থা  
এমন ভয়ানক হইয়াছিল যে, যুদ্ধে যত লোক মারা পড়ে, তাহার সাতগুণ লোক  
হাঁসপাতালে প্রাণ হারায় । এই সকল কথা ইংলণ্ডে পৌঁছিলে পর ইংলণ্ডের  
যুদ্ধমন্ত্রী ক্লোরেন্স নাইটিঙ্গেলকে যুদ্ধক্ষেত্রে গুরুত্বপূর্ণ যাইবার জ্ঞান অন্বেষণ  
করিলেন ।

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate EITHER of the following passages into English:— 7

(a) রামমোহন রায়কে আমাদের বঙ্গদেশের নির্মাণকর্তা বলিয়া আমরা জানি না। কি রাজনীতি, কি বিজ্ঞাশিক্ষা, কি সমাজ, কি ভাষা—আধুনিক বঙ্গদেশে এমন কিছুই নাই, রামমোহন রায় স্বহস্তে যাহার সূত্রপাত করিয়া যান নাই। এমন কি, আজ প্রাচীন শাস্ত্রালোচনার প্রতি দেশের যে এক নূতন উৎসাহ দেখা যাইতেছে, রামমোহন রায় তাহারও পথ-প্রদর্শক।

(b) জাতিভেদের উপর রমেশের কোন দিনই শ্রদ্ধা ছিল না, তাহাতে এই দুই গ্রামের অবস্থা পাশাপাশি তুলনা করিয়া তাহার অশ্রদ্ধা শতগুণে বাড়িয়া গেল। সে স্থির করিল, হিন্দুদের মধ্যে ধর্ম ও সামাজিক অসমতাই এই হিংসা ঘেষের কারণ। অথচ মুসলমান-মাত্রই ধর্ম সম্বন্ধে পংস্পর সমান, তাই একতার বন্ধন ইহাদের মত হিন্দুদের নাই এবং হহতেও পাবে না।

2. Explain any THREE of the following with reference to the context:— 15

(a) তিনি (বঙ্কিমচন্দ্র) ভগীরথের ত্রায় সাধনা করিয়া বঙ্গসাহিত্যে ভাব মন্দাকিনীর অবতারণ করিয়াছেন, এবং সেই পুণ্য-শ্রোত-স্পর্শে জড়ত্ব-শাপ মোচন করিয়া আমাদের প্রাচীন ভাস্করাণিকে সঞ্জীবিত করিয়া তুলিয়াছেন।

(b) এই নবীন চঞ্চল প্রেমহিল্লোলের উপর সৌন্দর্য যে কত ছন্দে কত ভঙ্গিতে বিচ্ছুরিত হইয়া উঠে, বিজ্ঞাপতির গানে তাহাই প্রকাশ পাইয়াছে। কিন্তু সমুদ্রের অন্তর্দেশে যে গভীরতা, যে নিশ্চলতা, যে বিশ্ববিশ্বস্ত ধ্যানলীনতা আছে, তাহা বিজ্ঞাপতির গীতি-ভরঞ্জের মধ্যে পাওয়া যায় না।

(c) বৈষ্ণব কবিদিগের গানগুলিও কাব্য—কেবল চারিদিকে উড়িয়া ছড়াইয়া পড়িবার জন্ত সুরগুলি তাহাদের ডান স্বরূপ হইয়াছিল। কবির যে কাব্যরচনা করিয়াছেন সুর তাহাই ঘোষণা করিতেছে যাত্র।

(d) ধর্মের প্রাণটাই যদি আকর্ষণ করিয়া লইয়াছে, তাহার মৃতদেহটাকে ফেলিয়া রাখিয়াছে কেন? এই বিবর্ণ বিকৃত শব্দদেহটাকে হতভাগ্য গ্রাম্য

সমাজ যে স্বার্থ ধর্ম বলিয়া প্রাণপণে জড়াইয়া ধরিয়া, তাহারই বিষাক্ত পুতিগন্ধময় পিচ্ছিলতায় অহর্নিশি অধঃপথেই নামিয়া চলিতেছে !

(e) আমি যখন আর থাকিব না, তখনও আমাকে যদি তিনি কমা করতে না পারেন, শুধু এই কথাটি আমার হৃদয়ে তাঁকে বোলো জ্যাঠাইমা, যত মন্দ বলে আমাকে তিনি জানতেন, তত মন্দ আমি ছিলাম না। আর যত দুঃখ তাঁকে দিয়েছি, তার অনেক বেশী দুঃখ যে আমিও পেয়েছি—তোমার মুখের এই কথাটি হয়ত তিনি অবিশ্বাস করবেন না।

∴. *Either*, Discuss in Bengali the character of জ্যাঠাইমা in *Pallī-samāj*. 8

Or, Reproduce in your own words Rabindranath Tagore's criticism of আষাঢ় and মঙ্গ by D. L. Roy. 8

4. Explain any two of the following passages :— 80

(a) মহাশয় সভ্যতী-শোপানে আরোহণ করিয়া বাহ্য জগতের প্রভু হইয়া বসিয়াছেন। এখন তিনি অগ্নিকে পূজা করা দূরে থাক, তাহাকে পাচক ও পরিচারক করিয়া তুলিয়াছেন। তাঁহার কৌশলে বায়ুও বশীভূত হইয়াছে। এদিকে দিবাকর চিত্রকরের কার্য্য পাইয়াছেন এবং ইন্দ্রের প্রিয় বিদ্বান্ মানব সন্তানের আদেশে দেশে দেশে সংবাদ বহিয়া বেড়াইতেছেন ;

(b) পূণ্যপাপে দুঃখে স্নেহে পতনে উত্থানে  
মাহুয হইতে দাও তোমার সন্তানে ;  
হে স্নেহাস্ত বঙ্গভূমি, তব গৃহকোড়ে  
চিরগিণ্ড ক'রে আর রাখিয়া না ধ'রে।  
দেশ দেসান্তর মাঝে যার যেথা স্থান  
খুঁজিয়া লইতে দাও করিয়া সন্ধান।

(c) লাঠি ! তুমি বাঙ্গালার আক্র-পরদা রাখিতে, মান রাখিতে, ধন রাখিতে, ধন রাখিতে, জন রাখিতে, সব রাখিতে। বদমাইস তোমার ভয়ে ত্রস্ত ছিল, ডাকাত তোমার জালায় ব্যস্ত ছিল, নীলকর তোমার ভয়ে নিরস্ত ছিল। তুমি তখন পীনাঁল কোড ছিলে—তুমি পীনাঁল কোডের মত ছুটের দমন করিতে, শিষ্টের পালন করিতে এবং পীনাঁল কোডের মত রামের অপরাধে স্ত্রীমের মাথা ভাঙিতে।

5. Correct the errors in the following :—

6

আমাদের মধ্যে ঐক্যতা থাকিলে কি দেশবিদেশে এমন করিয়া ছুঁগাম রটে! ইহাতে হৃদয় নিরাশার অন্ধকারে ডুবিয়া যায়। আমি সবিনয়পূর্বক কহিতেছি যে জীবনে এরূপ মনোকষ্ট কখনো পাই নি। আপনার এই সহানুভূতিতে আমার মহতুপকার হইল।

6. (a) Form adjectives from the following :—

5

পুরাণ, ফেন, দয়া, স্মৃতি, আঘাত।

(b) Expound the *samāsas* in :—

4

পরশুরাম, অর্দ্ধরাত্র, অকাল, অকেজো।

7. Translate into English EITHER of the following :—

25

(a) রাজপুতগণ স্বাধীনতার জন্ত সর্বস্ব বিসর্জন করিতে প্রস্তুত হয়। বিশেষতঃ স্ত্রীজাতির মান অক্ষুণ্ণ রাখিবার জন্ত রাজপুত না পারে এমন কর্ম নাই। রাজপুত স্ত্রীজাতির প্রতি অত্যাচার কোন প্রকারে সহ্য করিতে পারে না। স্বদেশের জন্ত যখনই তাহারা পরাজয় অবশুজ্ঞাবী দেখিয়াছে, তখনই তাহারা স্ত্রীলোকদিগকে চিতানলে প্রাণবিসর্জন করিতে দিয়াছে। কত শত বার রাজস্থানের উপর দিয়া ভীষণ বিপ্লব চলিয়া গিয়াছে; কিন্তু রাজপুত-রমণী ধর্ম বা সত্যত্বে জলাঞ্জলি দেয় নাই।

(b) কিছুক্ষণ পরে দেখি বিজ্ঞানাগর মহাশয় হন্ হন্ করিয়া আসিতেছেন, দর দর করিয়া ঘাম পড়িতেছে, হাতে একটা ছোট বাটি। আমাকে সেখানে দাঁড়াইয়া থাকিতে দেখিয়া জিজ্ঞাসা করিলেন—তুই এখানে কেন? আমি বলিলাম—আপনাকে খুঁজিতেছি, কোথায় গিয়াছিলেন? তিনি বলিলেন—ওরে খানিকক্ষণ আগে একটা সাঁওতালনী আসিয়াছিল; সে বলিল—বিজ্ঞানাগর, আমার ছেলেটার নাক দিয়ে হুহ করে রক্ত পড়ছে, তুই এসে যদি তাকে বাঁচাস। তাই আমি একটা হোমিওপ্যাথিক ওষুধ এই বাটি ক'রে নিয়ে গিচ্ছাম। আশ্চর্য দেখিলাম—এক ডোজ ওষুধে তার রক্ত পড়া বন্ধ হইয়া গেল।



## HINDI

(FOR FEMALE CANDIDATES)

*Paper-setters*— { RAI GOBINLAL BANERJEE, BAHADUR, B.A., KABIRATNA  
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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Explain fully in Hindi ONE extract from EACH of the following groups :—

16

## GROUP A

- (i) मेरी भव बाधा हरी राधा नागरि सीय ।  
जातन की भाईं परे खाम हरित दुति सीय ॥  
अधर धरत हरि के परत पीठ दीठ पट जीति ।  
हरित बांस की बांसुरी इन्द्र धनुष रंग सीति ॥  
अलि इन लीयन की कछू चपजी बड़ी बलाय ।  
नौर भरे नितप्रति रहैं तऊ न प्यास बुझाय ॥
- (ii) अति सुदेस सुदु चिकुर हरत मन मोहन मुख बगराई ।  
मानी प्रगट कंज पर मञ्जुल अलि अवली चिरि आई ॥  
नील सेत पर पीत लालमनि लटकन भाल लुनाई ।  
सनि गुरु असुर देव गुरु मिलि मनौ भौम सहित समुदाई ॥

## GROUP B

- (i) करम गति टारि नाहिं टरि  
सतवादी हरिचन्द से राजा नौच घर नौर भरी ।  
पांच पांडु अरु द्रोपदि हाड़ हिमालय गरी ।  
जज्ञ किया बलि लेख इन्द्रासन से पाताल धरी ।  
सीरा के प्रभु गिरधर नागर विष से अमृत करी ॥
- (ii) पाया मैजे बचपन फिर से बचपन बेटी बन आया ।  
उसकी मंजुल मूर्ति देखकर मुझमें नव जीवन आया ॥

मैं भी उसकी साथ खेलती जाती हूँ तुलनाती हूँ ।

मिलकर उसने साथ खूब भी मैं बची बन जाती हूँ

जिसे खोजती थी वर्षों से उसकी चप जाकर पाया ।

भाग गया था मुझे छोड़कर वह बचपन फिर से चाया ॥

(b) Explain all the allusions contained in extract (i) of Group B. 3

(c) Parse the words underlined in extract (i) of the Groups A and B. 2

2. (a) Give in your own words in Hindi the description of the saint (साधु) and the villain (दुष्ट) as given by सङ्गजी बाई in your text. 6

(b) Write what you know of any two of the following poets :—मीरा बाई, सूरदास, बिहारी and युगलप्रिया । 6

3. (a) Illustrate with examples how abstract nouns are formed in Hindi. 10

(b) Correct the following and account for each correction you make :—12

शुक्रवार का संध्या की जब उसने अपना घर जाता था वह एक अति सुन्दर चिड़िया देखा जिसे उसकी स्वामी ने हाट में बेचने लाता था । पूछने पर उसका मूल्य पांच रुपये बताया गया । इतनी अल्प मूल्य सुनके मेरा भी वह चिड़िया की मोल लेने का बड़ा इच्छा हुआ ।

4. Translate the following TWO extracts into English :— 20

(a) विष्णुति तिमिर में दीप ही भवितव्यता उपहार ही ।

बौते हुए का स्वप्न ही मानव हृदय का सार ही ॥

तुम सान्त्वना ही देव की तुम भाग्य का वरदान ही ।

टूटी हुई भंकार ही गतकाल की मुसकान ही ॥

उस लोक का सन्देश ही इस लोक का इतिहास ही ।

भूले हुए का चित्र ही सीई प्रहसि का दास ही ॥

(b) लोल लहर लहि पवन एक पै इका इमि आवत ।

जिमि नरगन मन विविध मनोरथ करत मिटावत ॥

सुभग स्वर्ग सोपान सरिस सब के मन भावत ।

दरसन मन्जन पान विविध भय दूर मिटावत ॥

श्रीहरि-पद-गख-चन्द्रकान्त-मन-द्रवित-सुधारस ।

नल्ल-कमल-मखन भव-खखन सुर-सरबस ॥

5. Translate the following TWO extracts into English :—

25

(a) वर्षा का समय था पड़ुंछा और नीले झुदल से आकाश छिप गया। सूर्य का दर्शन दुर्लभ हुआ और चारों ओर अन्धकार छा गया। रात दिन में कुछ भेद न रहा। मेघ के गर्जन और बिजली की चमक से हृदय कम्पायमान होने लगा। अति वर्षा के कारण नदियां उमड़ उमड़कर दोनों कनारों को तोड़ती हुई बड़े वेग से बहने लगीं और ताल तलैया नाली होते सब परिपूर्ण हो गये। चारों ओर पानीही पानी ही जाने से मार्ग लीप हो गया। बीच बीच में भरने की भनकार के साथ दादुर के सन्द के मिलने से एक अद्भुत प्रकार का आनन्द उत्पन्न होने लगा।

(b) बहुतसे विद्यार्थी समझते हैं कि विद्यालय ही शिक्षा के आरम्भ और समाप्ति का स्थान है परन्तु विद्वानों का मत है कि शिक्षा का काम विद्यालय ही में समाप्त नहीं होता। शिक्षा इतनी ऊँची वस्तु है कि जीवन के अन्त तक इसका उपाख्यान करना चाहिये। शिक्षा केवल इस लिये प्राप्त करनी न चाहिये कि हम उससे रुपया कमा सकें। आजकल बहुतसे लोगों की ऐसी धारणा है। रुपया कमाना भी एक आवश्यक कार्य है और यह भी शिक्षा से प्राप्त होता है परन्तु शिक्षा का परिणाम एक यही नहीं हो सकता है।

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain in Hindi any TWO of the following passages :—

(a) यदि उनका कोई वाक्य अपने विचार के विरुद्ध हो तो भी ठठ न करके उनकी श्रेष्ठता रखे हुए जिज्ञासु की भांति अपना अभिमत प्रकाश करना योग्य है। वे रोष प्रकाश करें तथापि शिष्टता से उत्तर देना चाहिये। 5

(b) सभीत ब्राह्मणगण ईर्ष्यावश जलने लगे। पण्डितों के पिछों में पीड़ा सी होने लगी। नवद्वीप के पण्डितवर्ग विद्यादिग्गज तो थे परन्तु विद्याभेद तथा पांडित्य हाग उपार्जित और संचित धन के मद्देन उनके भस्मिष्णु की बिगाड़ जला था। 5

(c) जहां नामरूप है वहीँ सत्य है, परन्तु यह निश्चित नहीं कि जहां सत्य है वहीँ नामरूप है। क्योंकि नामरूप की छोड़कर सत्य रह सकता है, सत्य की छोड़कर नामरूप नहीं रह सकते। सत्य आधार है नामरूप आविश्य है, सत्य आश्रय है नामरूप अग्रित है। 5

2. Explain the points of difference in the language of the *Satyārtha Prakāśh* and the *Satya Pratishṭhā*. The writer of the *Satyārtha Prakāśh* was a native of the Gujrāt and that of the *Satya Pratishṭhā* a Bengālī gentleman.

10

3. Translate into English :—

10

इसी मृदता से इन लोगों ने चौका लगाते लगाते विरोध करते कराते सब स्वातन्त्र्य, 'आनन्द' धन, सत्यं विद्या और पुरुषार्थ पर चौका लगाकर हाथ पर हाथ धरे बैठे हैं और इच्छा करते हैं कि कुछ मिले तो पकाकर खाएं परन्तु ऐसा न होने पर जानों सब आर्यवर्ष देश भर में चौका लगाके सर्वथा नष्ट कर दिया है। हां अहां भोजन करें उस स्थान की धोने सेपन करने भाड़ लगाने कुड़ा कर्कट दूर करने प्रयत्न अवश्य करना चाहिये।

4. Write a short note on *Repetition* in Hindī.

8

5. How are diminutives formed in Hindī ?

7

6. Explain the following in Hindī :—

30

प्रायः अधिकांश साहित्य सेवियों के जीवन में एक ऐसा समय आता है जब पाठकगण उनकी पास अज्ञापूर्व पत्र भेजने लगते हैं। कोई उनकी रचना-शैली की प्रशंसा करता है, कोई उनकी विचारों पर मुग्ध हो जाता है। लेखक की कुछ दिनों से यह सौभाग्य प्राप्त है। ऐसे पत्रों की पढ़कर उसका हृदय कितना गदगद हो जाता है उसे किसी साहित्य सेवी से पूछना चाहिये। पिछले साल सावन के महीने में मुझे ऐसा ही पत्र मिला। पत्रप्रेषक महींदर स्वयं एक अच्छे कवि थे। यह पत्र पढ़कर फूला न समाया।

7. Translate into English :—

25

संभवतः यह आशा करना सभी दुराशा भाव है कि वह समय भी निकट भविष्य में आएगा जब कुलीन वर्ग महिलायें कला की दृष्टि से सार्वजनिक रंगमंचकी अपनाने के लिये अग्रसर होंगी। इस की विश्वविख्यात गर्वकी श्रीमती पावलीबा ने इस लेख के मूल लेखक से अपनी यह आकांक्षा प्रकट की थी कि जिस दिन ऐसा होगा उस दिन कला धन्य एवं कृतज्ञ हो जाएगी। किन्तु भारतीय सामाजिक मर्यादा के जो प्रेमी हैं वे कला की कृतार्थ करने के लिये गृहदेवियों की गृहप्राक्कष की सीमा की उल्लंघन न करने देंगे। संभव है समस्त कला की दृष्टि से बंगीय रंगमंच जिस द्रुतवेग के साथ उत्तरोत्तर बढ़ रहा है उसके प्रवाह में कोई अवाञ्छित घटना भी हो जाए।

## URDŪ

(FOR FEMALE CANDIDATES)

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

25

*Either,*

آج خاور تھا مقام اپنا نوئل تھا باختر  
عیش و عشرت کی نہ فرصت تھی نہ عادت ہم میں تھی  
نگ تھا ہمکو مشقت سے نہ مزدوری سے عار  
جو بزرگی نہیں مشقت کی بدولت ہم میں تھی  
ہم شتربانی سے پہنچے نئے جہانبانی تلک  
اسلیے باقی شتربانی کی خصلت ہم میں تھی  
جو نشان اقبالمندی کے ہیں وہ سب ہم میں تھی  
حبِ دینی ہم میں تھی قومی مروت ہم میں تھی  
گھر ہمارے اور ہم سب وقف مہمانوں پہ تھے  
بٹربی مہمان نوازی و ضیافت ہم میں تھی  
پیوت سے واقف نہ تھے ہم تیرے اے ہندوستان  
احمدی اخلاق و اسلامی اخوت ہم میں تھی

(or)

جس سے کرتے تھے محبت بے ریا کرتے تھے ہم  
جس سے ہوتی تھی شکایت بڑھلا کرتے تھے ہم  
شکوہ ہوتا تھا تو اکثر منہ پہ کہہ دیتے تھے ہم  
شکر کرتے تھے تو غیبت میں سوا کرتے تھے ہم

دوست بڈجائے تے جسکے اُس سے کرتے تے نباہ  
 عہد کرتے تے تو عہدوں کو رُوا کرتے تے ہم  
 جنکے ہو جاتے تھے ساتھی انکا ہم دیتے تھے ساتھ  
 رنج و راحت میں شریک اُنکے رہا کرتے تھے ہم  
 کرتے تھے عسرت میں اُنکے واسطے فکر معاش  
 انکی بیماری میں تدبیر اور دوا کرتے تھے ہم  
 کام میں باروں کے ایڈے کام سب دیتے چھوڑ  
 اس میں روزے اور نمازیں تک قضا کرتے تھے ہم

2. Paraphrase the following in simple Urdu prose :—

25

قریب قریب تیرے علم و فضل سے معمور تھا  
 اب وہ اے اسلام تیری خیر و برکت کیا ہوئی  
 جس نے مغرب کو کیا مشرق وہ سورج کیا ہوا  
 جس سے گھر گھر بڈگیا یونان وہ حکمت کیا ہوئی  
 کوہ و دریا جنکے ہوتے تھے نہ ہرگز سب راہ  
 وہ آزادے کیا ہوئے اور وہ عزیمت کیا ہوئی  
 کوئی مشکل ہم کو میدان سے ہٹا سکتی نہ تھی  
 وہ ثبات اور پایداری اور وہ ہمت کیا ہوئی  
 ہوئی اے ہندوستان آمد ہماری بچھو یاد  
 وہ مسلمانوں کی ہیئت اور وہ صورت کیا ہوئی  
 وہ ہر دہن اور وہ سینے پہلوانی کیا ہوئے  
 وہ قد بالا وہ چہرے ارعوانی کیا ہوئے

8. Give the gender of the following words :—

15

نیند - ہوش - عقل - سمجھ - ارمان - آرزو - خواہش - امید - عشق -

تمنا - تقاضا - تدبیر - مرض - دوا - علاج

## 4. Correct the mistakes in the following:—

10

- (۱) اسکے لڑکا کو بغار آیا  
 (۲) ہم رات کو کھانا نہیں کھائے  
 (۳) اُس نے اس عورت سے شادی کیا  
 (۴) ہم تین روز ہوئے ہمارے ملک سے آئے ہیں  
 (۵) یہ بڑے کمرے میں کون رہتا ہے  
 (۶) ہم نے اُس سے ایک بات پوچھا  
 (۷) تم نے ہمارے واسطے روٹی لائی  
 (۸) یہ دس گھوڑے کی کیا قیمت ہے  
 (۹) نہ اس نے ہمکو جانے دیا نہ ہم نے جانے پایا  
 (۱۰) نہ وہ کچھ پہننے سکتا ہے نہ لکھنے سکتا ہے

## 5. Translate into Urdu:—

25

Once there was an Arab who had a very beautiful horse. He had reared it from its birth, and always fed it with his own hands. He was very kind to his horse, and when he called it by name it came running to him. He treated it like his own child, and the horse loved him as if he had been its father. This Arab did not live in a house. He lived in a tent on a wide plain. One night robbers came and caught the Arab, tied him with ropes, and carried him off. They also took away his horse.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## 1. Translate any two of the following extracts into English:— 20

A

جہاز کی حرکت اول تو چندان ناگوار نہیں معلوم ہوئی لیکن شام کے قریب طبیعت متغیر ہوئی شروع ہوئی - رات کا کھانا کھا کر سو رہے - صبح کو اُنکھ کھلی تو عجیب کیفیت تھی - دوراں سر اور متلی کی ایسی سخت

تکلیف تھی جو کسی طرح بیان میں نہیں آ سکتی ۔ دو دن تک غشی  
 کی سی حالت رہی ۔ جہاز کا ملازم کبھی کبھی چاء بسکت نارنگیاں لاتا تھا  
 کہ کچھ کھا لو لیکن ان چیزوں کے دیکھنے سے ابکائی آتی تھی \*

## B

اس شہر میں آ کر ایک سیاح کے دل میں غالباً جو خیال سب سے پہلے  
 آتا ہوگا وہ یہ ہوگا کہ اس عظیم الشان دار السلطنت کے در حصوں میں اسقدر  
 اختلافِ حالت کیوں ہے ۔ چنانچہ میرے دل میں سب سے پہلے یہی خیال  
 آیا ۔ میں نے اس کے متعلق بہت کچھ بحث و تفتیش کی ۔ باشندوں کے  
 اختلافِ حالت کا سبب تو میں نے آسانی سے معلوم کر لیا ۔ یعنی مسلمانوں  
 کا افلاس اور دوسری قوموں کا تمول لیکن سڑکوں اور گذرگاہوں کی ناہمواری  
 و غلاظت کا بظاہر یہ سبب قرار نہیں پا سکتا \*

## C

میگزین اور ماہوار رسالے جو ترکی زبان میں نکلتے ہیں نہایت قدر کے قابل  
 ہیں ۔ ان میں زیادہ مشہور اور معروف معارف ہے جو ہفتہوار نکلتا ہے ۔  
 اس رسالے میں ہمیشہ اعلیٰ درجے کے مضامین لکھے جاتے ہیں اور ترکوں  
 میں آج کل جو لوگ علوم جدیدہ کے ماہر ہیں زیادہ تر اس رسالے کے  
 ذریعے سے اظہارِ کمال کرتے ہیں ۔ مضامین زیادہ تر نیچر سائنس اور آلات  
 جدیدہ کے متعلق ہوتے ہیں اور کوئی پرچہ تصویر سے خالی نہیں ہوتا \*

2. Explain the following sentences :---

10

(۱) تمہاری معیت اُنکو کیونکر گوارا ہوگی

(۲) دل میں کہتا تھا کہ عربوں کی مہمان نوازی کی یہ کچھ تعریفیں  
 سنی تھیں اُنکو تو بات چیت میں بھی مضائقہ ہے

(۳) میں نے دیکھا کہ اکثر زبانتی مسلمانوں ہی کی طرف سے ہوتی  
 تھی اور افسرانِ جہاز کو اغماض کرنا پڑتا تھا



- (۴) اس قسم کی عام صحبتیں زندگی کی دلچسپی کے لیے نفع مند ضروری ہیں اور طبیعت کی شکستگی پر اُنکا کیا اثر پڑتا ہے
- (۵) آج کل سرکاری چھاپہ خانے کا طریق عمل اعتدال سے تجاوز کر گیا ہے

3. Give the meanings of the following words and phrases :-- 10

د م ٹھنڈا - گردہ ہر جانا - عامیانه و مقلدانہ - مٹلا مذہب - تفریح و بذلہ سنجی - نجس و کشیف - اجمال سے کام لینا - دکانیں نہایت مہذب ہیں - محنت کا کوئی دقیقہ اُٹھا نہیں رکھا - مصالحِ ملکی \*

4. Translate into English :—

25

ایک دفعہ کبھی راجا باہر جنگل میں شکار کھیلتے گیا ۔ کسی بوڑھے آدمی کو دیکھا کہ پھل کا ایک پیڑ بوڑھا ہے ۔ راجا کے ساتھ امیر وزیر بھی تھے ۔ اُن سے کہنے لگا کہ بوڑھا کیسا بیوقوف ہے ۔ شاید اسے یہ خیال ہے کہ میں ابھی جوان ہوں اور جب تک یہ درخت پھل دیگا جیتا رہوں گا ۔ سب امیر وزیر یہ بات سن کر ہنسنے لگے ۔ راجا نے بوڑھے سے پوچھا بڑے میاں تمہاری عمر کیا ہوگی ۔ بوڑھے نے جواب دیا مہاراجا اسی برس کی ہے لیکن ابھی تندرست اور مضبوط ہوں ۔ راجا نے کہا بھلا یہ تو بتاؤ کتنے برس اور جیو گے \*

5. Give the gender of the following words :--

10

کتاب - پانی دوات - قلم - زبان - دل - آنکھ - کان - ناک - گردن

6. Translate into Urdu :—

26

Once a man had a parrot. He taught it to say, 'There is no doubt about it'. Whenever you asked this parrot any question, it would put its head on one side, look very wise, and answer, 'There is no doubt about it'. One day the man took the parrot to the bazaar to sell it. He asked a hundred rupees for it. All the people said, 'That is too high a price for a parrot. We will not buy it'. At last a nobleman came there. He said, 'What is there wonderful about this bird? Why do you ask so much money? Is it worth a hundred rupees?' The owner said, 'Do not ask me. Ask the parrot'.

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### FIRST PAPER

### History of England

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Six questions to be attempted, of which at least TWO must be from each group.*

1. Give some account of the Roman rule in Britain.
2. Write a short account of the anti-feudal measures of the Norman kings.
3. 'Over the Barons Henry II triumphed; the Church on the other hand worsted him.' Explain.
4. 'The Magna Charta became one of the starting points of English national liberties.' Expand.
5. 'Simon de Montfort is one example of the many which history offers of an alien to whom England owes much.' Elucidate.
6. 'The great event of the Stuart period is the struggle between the King and Parliament.' Illustrate the truth of this observation by referring to the reign of the first or second Stuart sovereign.
7. 'Cromwell's greatness at home was a mere shadow of his greatness abroad.' Comment.
8. 'The Restoration brought Charles II to Whitehall; and in an instant the whole face of England was changed.' How?
9. Sketch the career EITHER of Walpole OR of the younger Pitt.
10. 'The founders of modern England are its inventors and engineers.' Explain.
11. 'The Reform Act of 1832 marked a revolution in English history but a revolution of a very English kind.' Explain.

12. Whom do you regard as the greatest Prime Minister of the nineteenth century? Give reasons.

13. Give a critical estimate of the Irish policy of Gladstone.

14. Write notes on any FOUR of the following :—

- (a) The Provisions of Oxford.
- (b) The Peasants' Revolt.
- (c) The Instrument of Government.
- (d) The Trial of the Seven Bishops.
- (e) The Middlesex Election.
- (f) The Continental System.
- (g) The Anti-Corn Law League.
- (h) The Chartists.
- (i) The Sinn Féin.

## SECOND PAPER

### History of Greece and Rome

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Not more than six questions to be attempted.*

1. *Either*, Estimate the influence of Geography on the history of Greece.

*Or*, 'Theoretically the Spartan Constitution was a democracy.' Explain.

2. *Either*, Describe the battle of Marathon.

*Or*, 'Athens was the Saviour of Greece against Persia.' Justify.

3. *Either*, 'The Imperialism of Pericles was indeed of a lofty kind.' Explain.

*Or*, Analyse the causes of the failure of the Sicilian expedition.

4. *Either*, Sketch the career of Demosthenes.

*Or*, 'Alexander was greater in genius than in character.' Elucidate.

5. Write notes on :— (a) the Olympian Games, (b) Cleon, (c) Leuctra, (d) the Achaean League.

6. *Either*, Give a brief sketch of the Constitution of Rome in the regal period.

*Or*, 'The struggle between the Patricians and the Plebeians ended in political equality and Rome became in form a pure democracy.' Elucidate.

7. *Either*, 'Rome and Carthage were on the whole, when the struggle began, equally matched.' Explain.

*Or*, Sketch the career of Hannibal.

8. *Either*, Estimate the importance of work of the Gracchi.

*Or*, Criticize the reforms of Sulla.

9. *Either*, 'The assassination of Caesar could not prevent the Empire.' Discuss.

*Or*, What were the causes of the downfall of the Roman Empire?

10. Write notes on :—(a) Pyrrhus, (b) Magnesia, (c) Actium, (d) the reforms of Diocletian.

## LOGIC

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Distinguish between Science and Art. Is Logic a Science or an Art? Indicate the uses of the study of Logic. 14

*Or*, What do you understand by Truth? Distinguish between (a) Formal and Material Truth, (b) Mediate and Immediate Truth.

2. *Either*, What is meant by the Denotation and Connotation of a term? How far is it true that Denotation and Connotation vary in inverse ratio? Explain by means of concrete illustrations. 14

*Or*, Explain and illustrate *Differentia*, *Property*, and *Accident*. Distinguish between Separable and Inseparable Accident, giving an example of each.

3. *Either*, Explain, and illustrate with concrete examples, the nature of Logical Division, and determine its relation to Definition. 14

Or, State and illustrate the logical rules of a sound Definition, and determine the relation of Definition to the Predicables.

4. *Either*, Explain, and illustrate with concrete examples, the nature of the following kinds of Propositions:—(a) *Disjunctive*, (b) *Exclusive*, (c) *Exceptive*, and (d) *Indesignate*. 14

Or, Restate the following propositions in their strictly logical forms, adding the symbols A, E, I, or O:— 4

- (a) None think the fools great but the fools themselves.
- (b) Every mistake is not a proof of ignorance.
- (c) Children alone are admitted free to the show.
- (d) Only philosophers find difficulty in a matter like this.

5. *Either*, What is meant by the logical Opposition of Propositions? Prove by means of concrete examples that sub-contrary propositions (a) cannot both be false, (b) may both be true. 14

Or, Explain and exemplify the distinction between Conversion, Contraposition, and Obversion. Can every proposition be contraposed or converted? Explain.

6. *Either*, What is *Reduction*? Is Reduction necessary? Reduce *Disamis* both directly and indirectly. 14

Or, Define a *Dilemma*, indicating its different forms. What is 'rebutting a Dilemma'? Illustrate your answer by a concrete example.

7. State any four of the following arguments in their strictly logical forms and test their validity, mentioning the fallacies (if any) involved in them:— 16

(a) He must be a Scotsman, for no Scotsman can see the force of a joke.

(b) I do not derive my opinion from the newspapers; for I never read any of them.

(c) We know that the policy was wrong; for otherwise it would not have failed.

(d) If the charge is false, the author of it is either ignorant or malicious; but the charge is true; therefore he is neither.

(e) Warm countries alone produce wine; Spain is a warm country; therefore Spain produces wine.

(f) Lawyers cannot afford to be sincere, and no one who is insincere is trustworthy. Therefore no trustworthy people will be found to be lawyers.

(g) Mercy but murders, pardoning those that kill.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

1. *Either*, Compare the process of Induction with that of Deduction. State clearly wherein they differ. What is Induction by Simple Enumeration? 14

Or, Explain what is meant by Uniformity of Nature. Is the Law of Uniformity of Nature an induction from experience? Discuss the question.

2. *Either*, Explain the scientific meaning of 'Causal Connexion'. Discuss the view that one and the same effect may proceed from a number of alternative causes. 14

*Or*, What is a Fact? In what sense are facts the foundation of science? Explain in this connexion the superiority of Experiment over Observation. Give concrete examples. 14

3. What do you understand by the Experimental Methods? Show, by an example, that the Method of Residues involves the application of Deduction. 14

4. *Either*, Explain the so-called 'Deductive Method'. Describe the Physical Method, and give an example to show its application. 14

*Or*, Explain the relation in which Probability stands to Induction. Estimate the value of inference by Analogy. 14

5. *Either*, 'The object of science is to explain.' Discuss this statement fully. Mention its three principal forms. 14

*Or*, State the place and function of Hypothesis in Induction. What are the conditions of a valid hypothesis? 14

6. *Either*, Explain clearly the meaning of the term 'law' as employed in Natural Science. What are the various kinds of laws in science? Distinguish carefully the Empirical Laws from Laws of Nature. 14

*Or*, Explain the principle of Scientific Classification. Distinguish Natural and Artificial Classification. What is Classification by Type? 14

7. Test the validity of any FOUR of the following arguments, naming the fallacy (if any), and stating the reasons in each case: - 16

(a) The eating of mangoes is the cause of boils.

(b) All religions lead to God, for do not all roads lead to Rome, and all rivers fall into the sea?

(c) The mind must be a function of the brain, since any serious injury to the brain is always followed by loss of consciousness.

(d) The flood was evidently due to the wrath of the goddess, since it began immediately after she had been slighted and it subsided as soon as she was propitiated by sacrifices.

(e) A conjuror produces wonderful results by different tricks on different occasions, taking care to wave his hand each time. Therefore the waving of the hand is the cause of the wonderful results.

(f) The University is the Temple of Learning, and therefore Politics has no place in it.

## ELEMENTS OF CIVICS AND ECONOMICS

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Answer any six questions.*

1. 'The business of a modern government divides itself into three main parts—legislative, judicial, and executive.' Illustrate.
2. What is meant by Federal Government? What are its merits?
3. In what sense is liberty a creation of the law?
4. Describe the powers of the Governor-General of India.
5. 'Democracy may be classified broadly under two distinct divisions—direct and representative.' Explain and illustrate.
6. Describe the essential functions of political parties in a democracy.
7. Describe the composition and functions of the Governor-General's Executive Council.
8. What is the status of Indian Native States within the British Empire?
9. Describe the constitution and functions of District Boards in Bengal.
10. Discuss the rights and duties of a citizen in a modern state.

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any six questions.*

1. Describe the principal functions of money. 'A cheque is not money.' Explain.
2. What are the chief functions of banks?
3. 'The price paid for the use of land tends to approximate to the producer's surplus, i.e., to the economic rent.' Explain this statement.
4. Compare the advantages and disadvantages of large-scale and small-scale industries.

5. Discuss the economic aspects of the joint family and the caste system in India.
6. Give some idea of the distribution of India's foreign trade (a) by principal countries, and (b) by chief commodities.
7. What are the causes of agricultural indebtedness in India? Suggest some remedies.
8. Describe the organization of famine relief in India.
9. Discuss the economic advantages of the development of railways in India.
10. Distinguish between a direct tax and an indirect tax. Give examples.

## CIVICS ( SPECIAL )

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Distinguish between a Unitary and a Federal Constitution.
2. What is meant by responsible government? To what extent is there responsible government in (a) Great Britain, and (b) Bengal, at the present time?
3. Describe the organization of rural self-government in Bengal.
4. What do you mean by the expression 'political liberty'?
5. Describe the characteristic features of a political party. Show how a well-regulated party promotes the political education of the general body of people.
6. 'Sovereignty implies that the State is free from both internal and external control.' Discuss.
7. Describe the constitution and functions of the Central Legislature in India.
8. 'Rights and duties go together' Elucidate the statement.
9. What are the salient features of the Morley-Minto Reforms of 1909?
10. Describe the existing organization for the administration of Civil justice in Bengal.

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any Six questions*

1. What are the conditions on which efficiency of labour depends?
2. Describe how a typical joint-stock company raises its capital.
3. Explain clearly the law of Diminishing Returns as applied to agriculture.



4. Distinguish between convertible and inconvertible paper currency, and discuss the merits and defects of each of these types.
  5. Differentiate between nominal and real wages. Estimate the probable effect of a general rise of prices on real wages in a country.
  6. Discuss the importance of the monsoons in the economic life of India.
  7. Describe some of the more important cottage industries in India.
  8. How far has the Indian joint family system promoted the economic welfare of the country?
  9. Discuss the merits and defects of the *Zemindari* system of land settlement in India.
  10. What are the chief heads of Central revenue in India? Write a short note on each of these items.
- 

## COMMERCIAL GEOGRAPHY

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*Answer any six questions.*

*All the questions are of equal value.*

1. Discuss the causes of the localization of the cotton industry in Lancashire.
  2. 'Egypt is the gift of the Nile.' Discuss.
  3. Name the chief British coal-fields, and examine their connexion with different British industries.
  4. What do you understand by the Mediterranean type of climate? What are the chief products associated with this climate?
  5. In the course of thirty years Japan has made great progress in the matter of industrial development. State briefly how it has been possible for her to do so.
  6. Why does not Australia, which is a large producer of wool, develop extensive woollen manufactures?
  7. State the leading features of German manufactures to-day.
  8. State the position and account for the importance of Chicago, Birmingham, and Sydney.
-

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Question 1 and any FIVE of the rest.*

1. Draw a sketch-map of India showing the location of the sugar industry. 20
2. Do you think that the development of Vizagapatam will affect the importance of the port of Calcutta? If so, give your reasons. 16
3. Discuss the conditions favouring the growth of (a) rice, (b) wheat, (c) tea, and (d) cotton. Name the places where they are grown in India. 16
4. Examine the growth and present position of the jute industry in India. 16
5. Examine the present position of the coal industry in India. Indicate the methods by which the condition of the industry may be improved. 16
6. Examine the position of India in regard to the iron and steel industry as compared with that of other important iron and steel producing countries. 16
7. Discuss the development of water-power in India. 16
8. Discuss the importance of the following:—(a) Karachi, (b) Narayanganj, (c) Lucknow, (d) Asansol, (e) Chittagong, and (f) Allahabad. 16

## COMMERCIAL ARITHMETIC AND ELEMENTS OF BOOK-KEEPING

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt any EIGHT questions.*

1. Show that

$$\frac{714 \times 79 \times 3 \cdot 7}{36500} + \frac{715 \times 84 \times 3 \cdot 7}{365} + \frac{814 \times 82 \times 3 \cdot 7}{36500}$$

$$= \frac{3 \cdot 7}{36500} \times \{714 \times (79 + 84 + 82) + 84 + 8200\}.$$

2. If the population of a town increases every year by 1·8 per cent. of the population at the beginning of that year, in how many years will the total increase of population be 30 per cent.?

3. A banker discounts a bill which has 25 days to run before it is legally due at  $5\frac{1}{8}$  per cent. per annum. This discount amounts to £1. 0s. 3d. For what sum was the bill drawn?

4. In a certain year Rs. 49,36,600 5 per cent. stock was converted into 4 per cent. stock. Rs. 100 of the 5 per cents. was equivalent to Rs. 105 of the 4 per cents. A sum of Rs. 6,19,300 was paid off to those people unwilling to accept the reduction in the rate of interest. Find the annual saving in interest.

5. A tea dealer blends 75 lb. of tea at Rs.  $1\frac{1}{2}$  per lb. with 45 lb. of tea at Rs.  $1\frac{1}{5}$  per lb. What is the lowest price per lb. at which he can sell the mixture so as to gain at least 25 per cent.?

6. A bankrupt fails for Rs. 1,13,606. His assets are estimated at Rs. 98,972. A first dividend at the rate of 23 pies in the rupee is paid. On the estate being wound up the assets realize 90 per cent. of their estimated value and the expenses of realization absorb 15 per cent. of the realized value. How much in the rupee can be paid as final dividend?

7. Given that an English gallon is 277.274 cub. in., that 6 United States gallons are equal to 5 English gallons, and that a litre is 61 cub. in., express the United States' gallon in litres correct to two places of decimals.

8. A manufacturing firm is accustomed to allow to trade customers a discount of 15 per cent. on the prices in its published list. This has given it a profit of 19 per cent. on the cost of manufacture. The cost goes up 12 per cent. and the firm issues a new price-list with all the prices put up 10 per cent. If the firm continues to allow its customers the same rate of discount, what percentage of profit will it now make on cost of manufacture?

9. Find the square root of  $223\frac{5}{8}$ .

10. Having a certain sum to invest, a man puts half of it in 5% stock at 105 and the other half in  $4\frac{1}{2}$ % stock at par, the prices in each case including brokerage. If he had invested  $\frac{2}{3}$  of it in the 5 per cents. and the rest in  $4\frac{1}{2}$  per cents. his annual return would have been £2. 15s. more. How much did he invest?

11. Find the number of years and fraction of a year in which a sum of money will treble itself at compound interest at 4 per cent. per annum.

12. A man obtains a loan of Rs. 6,000 and agrees to repay it in five equal annual instalments at 5 per cent., the first payment to be made at the end of a year. What should each instalment be?

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only six questions are to be attempted,  
including Question 9.*

1. (a) What do you understand by 'capital', as applied to (i) a proprietor, and (ii) a business? 6

(b) Does 'office furniture' come under capital? 2

(c) A Paper-pulp Company is incorporated with a Capital of Rs. 10,00,000, in shares of Rs. 10 each. 10,000 shares are taken by

the Directors as qualifying shares and are fully paid up. 50,000 shares are issued to the public, Rs. 2/8 being paid on application and Rs. 2/8 on allotment, the balance being payable at call.

State the amounts under the following heads:—(i) Authorized Capital, (ii) Issued Capital, (iii) Paid-up Capital, and (iv) Called-up Capital. 8

2. (a) Distinguish between a Bill of Exchange and a Cheque. 6

(b) A receives a cheque from B in settlement of a demand and endorses it to a creditor C in settlement of C's dues from A. The cheque is finally dishonoured.

How are these facts represented in the accounts in the language of book-keeping? 6

(c) What protection, if any, does a Bill of Exchange possess against 'dishonour'? 4

3. In closing the books of a manufacturing firm, how would you arrive at the amount representing the value of 'works in progress'? How would such an item appear in the annual accounts? Answer by giving concrete examples. 16

4. (a) What is the main object of the following books, and what difficulties would arise in their absence:—(i) the Sales Day Book, (ii) the Purchases Returns Book, and (iii) the Journal? 12

(b) Is the Cash-book a subsidiary book? Give reasons. 4

5. State, giving reasons, how the following items are to be treated in the accounts of a concern at the time of annual closing:— 16

(a) Balance due to a contractor for work done.

(b) Wages for a week paid in advance.

(c) Doubtful debts.

6. (a) What is the object of the 'trial balance'? 4

(b) With what balances do the following accounts generally close, and what do such balances represent:—(i) Capital Account, (ii) Purchases Accounts, (iii) Bills Receivable, and (iv) Cash Account? 12

7. (a) Write a short note on the broad classification of accounts in the ledger, pointing out the essential difference between them. 12

(b) Is such classification rigid? 4

8. In a concern all receipts are required to be remitted in full to the Bank, and all payments are made either by cheques drawn on the Bank or out of a fixed imprest recouped as and when necessary. Indicate on what lines the accounts of the concern should be kept and what reconciliation do they require, and why. 16

9. Criticize the following Trading and Profit and Loss Account and Balance Sheet of a concern as drawn up by a novice, and indicate how you would draw them up:— 20

*I. Trading and Profit and Loss Account.*

Dr.		Rs. Rs.		Cr. Rs.	
To Stock on hand	5,325			By Goods sold ...	3,000
Less Plant ...	1,325			„ Additions to Plant ...	250
		4,000		„ Stock in hand ...	3,750
„ Materials purchased ...	2,000			„ Balance to Balance sheet ...	700
„ Wages ...	750				
„ Rents, Rates, Insurance	500				
„ Bad debts ...	200				
„ Trade charges ...	250				
		Rs. 7,700			Rs. 7,700

II. *Balance Sheet.*

<i>Liabilities</i>		<i>Assets</i>	
	Rs.		Rs.
Share Capital ...	5,000	Sundry debtors ...	2,500
X.Y.Z. ...	1,500	Plants and machinery ...	1,500
Bankers ...	750	Stock in hand ...	3,750
Sundry creditors ...	1,250	Cash in hand ...	50
		Balance ...	700
	<u>Rs. 8,500</u>		<u>Rs. 8,500</u>

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

GROUP A

Answer Question 6 (starred) and any two of the others from this group.

1. (i) If  $\alpha$  and  $\beta$  be the roots of the equation 6

$$ax^2 + bx + c = 0,$$

express  $\alpha^2 + \beta^2$  in terms of  $a, b, c$ .

- (ii) Prove that for real values of  $x$  the expression  $3x^2 - 6x + 8$  can never be less than 5. 6

2. (i) If 
$$x = \frac{\sqrt{a+2b} + \sqrt{a-2b}}{\sqrt{a+2b} - \sqrt{a-2b}},$$

show that  $bx^2 - ax + b = 0$ . 6

- (ii) Solve the equations

$$x^y = y^x \text{ and } x = 2y. \quad 6$$

3. (i) Prove that, with the usual notation,

$${}^nC_r = {}^nC_{n-r} \quad 6$$

- (ii) At an election there are five candidates and three members to be elected, and a voter is entitled to vote for any number of candidates not greater than the number to be elected. In how many ways may a voter choose to vote? 6

4. (i) Establish the binomial theorem for a positive integral index. 5

Deduce that the sum of the binomial coefficients in the expansion of  $(1+x)^n$  is  $2^n$ . 3

- (ii) In the expansion of  $(1+x)^{m+n}$ , where  $m$  and  $n$  are positive integers, prove that the coefficients of  $x^m$  and  $x^n$  are equal. 4

5. (i) Expand  $\log_e(1+x)$  in ascending powers of  $x$ . For what values of  $x$  is the expansion valid? 6

- (ii) What sum should be paid for an annuity of £100 a year to be paid for 40 years, money being supposed to be worth 4 per cent. per annum? 6

(Logarithmic tables may be consulted.)

- \*6. (i) Prove the exponential theorem. 6

- (ii) Show that 6

$$1 + \frac{1+2}{1 \cdot 2} + \frac{1+2+3}{1 \cdot 2 \cdot 3} + \frac{1+2+3+4}{1 \cdot 2 \cdot 3 \cdot 4} + \dots = \frac{3e}{2}.$$

GROUP B

Answer any two questions from this group.

7. (i) Prove that 5

$$\cos(A+B) = \cos A \cos B - \sin A \sin B.$$

- (ii) Prove the following :

$$(1) \sin A (1 + \tan A) + \cos A (1 + \cot A) = \sec A + \operatorname{cosec} A, \quad 5$$

- (2)  $\sin 2A + \sin 2B + \sin 2C = 4 \sin A \sin B \sin C$ , where  $A, B, C$  are the angles of a triangle. 4

8. (i) Prove the relations in any triangle

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}.$$

- (ii) Given
- $a=70$
- ,
- $b=35$
- ,
- $C=36^\circ 52' 12''$
- ,
- $\log 3=0.4771213$
- ,

$L \cot 18^\circ 26' 6'' = 10.4771213$ , calculate the other two angles  $A$  and  $B$ . 8

9. (i) Show that the general values of all angles which have the same cosine as
- $a$
- are included in the formula
- $2n\pi \pm a$
- , where
- $n$
- is zero or any integer positive or negative. 4

- (ii) If
- $\sin A = \sin B$
- , and
- $\cos A = \cos B$
- , prove that either
- $A$
- and
- $B$
- are equal or they differ by some multiple of four right angles. 4

- (iii) Calculate the value of
- $\sin 18^\circ$
- . 4

10. (i) Prove that
- $\tan^{-1}x + \tan^{-1}y = \tan^{-1} \frac{x+y}{1-xy}$
- . 4

- (ii) Find the value of
- $\sin(\sin^{-1}\frac{1}{2} + \cos^{-1}\frac{1}{2})$
- . 4

- (iii) Find the least value of
- $\theta$
- which will satisfy the equation
- $\sin \theta + \cos \theta = \sqrt{2}$
- 4

## \* GROUP C

Answer any TWO questions from this group.

11. Prove that, in a parabola, the square of the ordinate of any point is equal to the rectangle contained by the latus rectum and the abscissa of the point. 8

Find the latus rectum and the coordinates of the focus of the parabola  $3y^2 = 4x$ , and determine the points in which it is met by the straight line  $2x = 3y$ . 6

12. Prove that the tangent at any point of a parabola bisects the angle which the focal distance of the point makes with the perpendicular drawn from the point on the directrix. 8

Prove that the tangent to a parabola at any point bisects the straight line joining the focus to the foot of the perpendicular from that point on the directrix. 6

13. Prove that the sum of the focal distances of any point on an ellipse is constant and equal to the major axis. 8

For what value of  $p$  does the ellipse 6

$$px^2 + 4y^2 = 1$$

pass through the points  $(\pm 1, 0)$  ?

Finds the lengths of its two axes.

14. Prove that the middle points of a system of parallel chords of an ellipse lie on a straight line passing through the centre. 8

Hence show how the centre of a given ellipse can be determined. 6

## GROUP D

Answer only ONE question from this group.

15. Show that straight lines in space which are parallel to a given straight line are parallel to one another. 6

$AB$  and  $CD$  are two parallel straight lines and  $O$  is a point lying outside the plane containing them. Show that the planes  $OAB$  and  $OCD$  intersect in a straight line parallel to both  $AB$  and  $CD$ . 6

16. (i) Prove that of all straight lines drawn from an external point to a plane, the perpendicular is the shortest. 6

(ii) If the sum of two face-angles of a solid angle is equal to the third face-angle, show that the three edges are coplanar. 6

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Questions 6 and 10 (starred) and FIVE of the others.  
Not more than FOUR questions (including the starred one)  
from either group may be attempted.*

## GROUP A

1. Find the conditions of equilibrium of a number of forces acting on a particle. 6

A load  $P$  is tied to the point  $P$  of a light uniform string  $XPY$  which is suspended from two points  $X, Y$  in the same horizontal line. If  $XP$  and  $YP$  be unequal and the load  $P$  be gradually increased, which part of the string will break first? If the breaking tension of the string be 412.5 lb. wt., find the maximum load the string will support, in the case when  $XY = 7$  ft. 6 in.,  $PX = 6$  ft., and  $PY = 4$  ft. 6 in. 8

2. Find the resultant of two unlike and unequal parallel forces acting on a rigid body. 7

Two men have to carry a block of stone of weight 311 lb. on a light plank; how must the block be placed so that one of the men should bear the weight of 205 lb. more than the other? 7

3. Describe the first system of pulleys with a neat diagram, and calculate its mechanical advantage. 10

If, in such a system, the 'power' = 20 lb., the 'weight' =  $16\frac{1}{2}$  cwt., and the weight of each pulley = 2 lb., find the number of movable pulleys in the system.

4. Prove that the position of the centre of mass of any number of particles lying in the same plane is determined by the formulae 6

$$\bar{x} = \frac{\sum mx}{\sum m}, \bar{y} = \frac{\sum my}{\sum m}.$$

Hence or otherwise show that the centre of mass of a uniform triangular lamina is the same as that of three particles of equal mass placed at the middle points of the edges of the lamina. 8

5. Explain the terms 'work' and 'power'. 4

A well, of which the section is a circle of diameter 14 ft. and depth 206 ft. is half full of water. Find the work done, in foot-pounds, in pumping out the water to a level 4 ft. above the top of the well in 10 minutes, and calculate the average horse-power of the pumping machine. 10

- \*6. Obtain the conditions of equilibrium of a system of coplanar forces acting on a rigid body. 7

Two equal uniform rods  $AC, CB$  are freely jointed at  $C$  and rest in a vertical plane with the ends  $A$  and  $B$  in contact with a rough horizontal plane. If the equilibrium is limiting and the coefficient of friction is  $\mu$ , show that 8

$$\sin AOB = \frac{4\mu}{1 + 4\mu^2}.$$



## GROUP B

7. Explain clearly what is meant by the velocity of one moving particle relative to another such particle, and show how it can be determined if their velocities be given. 7

A train moving at the rate of 45 miles per hour is struck by a stone moving at right angles to the train with a velocity of 44.2 ft. per second. Find the magnitude and direction of their relative velocity. 7

8. Prove the formula  $v^2 = u^2 + 2fs$ , for uniformly accelerated rectilinear motion, and apply it to find the greatest height attained by a particle projected vertically upwards against gravity with initial velocity  $u$ . 7

A stone falling from the top of a vertical tower has descended  $x$  ft. when another is let fall from a point  $y$  ft. below the top. If they fall from rest and reach the ground together, show that the height of the tower is 7

$$\frac{(x+y)^2}{4y} \text{ ft.}$$

9. Enunciate and explain Newton's second law of motion, and deduce the formula  $P = mf$ . 7

A railway train, exclusive of engine, weighs 435 tons and starting along a level line from rest attains a speed of 40 miles per hour in 7 minutes. Calculate the average pull between the engine and train, taking the resistance at 15 lb. per ton. 7

\*10. A particle is projected from a horizontal plane with initial velocity  $u$  and inclination  $\alpha$  to the horizontal plane. Find the position, velocity, and direction of motion of the particle after  $t$  seconds. 6

Two shots are projected from a gun at the top of a hill with the same velocity  $u$  at the angles of elevation  $\alpha$  and  $\beta$  respectively. If the shots strike the horizontal ground through the foot of the hill at the same point, show that the height  $h$  of the hill above the plane is given by 9

$$h = \frac{2u^2}{g} \frac{1 - \tan \alpha \tan \beta}{(\tan \alpha + \tan \beta)^2}.$$

11. Two smooth spheres of masses  $m_1$  and  $m_2$ , moving with velocities  $u_1$  and  $u_2$  in the same direction impinge directly. If  $e$  be their coefficient of restitution, find their velocities after impact. 8

Show that the loss of kinetic energy of the system due to impact is 6

$$\frac{1}{2} \frac{m_1 m_2}{m_1 + m_2} (u_1 - u_2)^2 (1 - e^2).$$

12. A particle of mass  $m$  slides down the outside of the circumference of a smooth vertical circle of radius  $r$ , starting from rest at the highest point. Find the velocity of the particle and the pressure on the circle at any time. 8

What happens when the vertical depth of the particle below the highest point of the circle exceeds  $\frac{1}{2}r$ ? State the nature of the subsequent motion, giving reasons for your answer. 6

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Attempt not more than SIX questions, of which at least TWO must be from each of GROUPS A and C and ONE from GROUP B.*

## A

1. Explain carefully what is meant by simple harmonic motion, and give two examples illustrating your answer. Explain the terms 'period', 'phase', and 'amplitude' by reference to the motion of a pendulum.

2. State the laws governing the motion of bodies falling freely under the action of gravity.

Two stones are projected vertically upwards at the same instant. One ascends 112 ft. higher than the other, and returns to earth 2 seconds later. Find the velocities of projection of the stones.

[ $g = 32$  ft. per sec. per sec.]

3. State Archimedes' Principle, and show how it can be verified experimentally.

A cylinder of wood, whose specific gravity is 0.25, has another cylinder of metal (specific gravity 8.0) attached to one end. The cylinders are 2 in. in diameter, they have the same axis, and are respectively 20 in. and 1 in. long. If the whole is placed in water, find how much of it will be above the surface.

4. Describe a mercury barometer suitable for accurate measurements of the atmospheric pressure, and point out the precautions necessary for its use.

## B

5. Explain fully how the velocity of sound in the open air has been determined.

If the velocity of sound in air at  $0^{\circ}\text{C}$ . and 76 cm. of mercury pressure is 330 metres per sec., calculate the velocity at  $27^{\circ}\text{C}$ . and 74 cm. pressure.

[Coefficient of expansion of air =  $0.003665$ .]

6. Describe the modes of oscillation of the air in open and closed organ-pipes, and explain the difference in quality of the sounds emitted by them.

Two organ-pipes, open at both ends, are sounded together and four beats per second are heard. The length of the shorter pipe is 30 in. Find the length of the other.

[Velocity of sound = 1,120 ft. per sec.]

7. Describe two methods which may be used to determine the frequency of a vibrating body.

## C

8. Explain why—

- (a) the reading of a thermometer is altered by wrapping a wet rag round the bulb;
- (b) a mixture of ice and salt produces a considerable lowering of the temperature;
- (c) when the bulb of a thermometer is immersed in hot water, the mercury surface is sometimes seen to fall before rising;
- (d) the same quantity of heat produces different changes of temperature in different bodies.

9. Explain how the coefficient of expansion of a gas at constant pressure can be determined experimentally.

10. State what is meant by the term 'relative humidity', and describe how its value may be determined.

On a day when the temperature of the air was  $16.5^{\circ}\text{C}$ ., the dew-point was found to be  $12^{\circ}\text{C}$ . Find the relative humidity.

[Maximum vapour-pressure of water at  $12^{\circ}\text{C}$ . = 1.046 cm. of Hg,  $16^{\circ}\text{C}$ . = 1.364 cm. of Hg, and  $17^{\circ}\text{C}$ . = 1.442 cm. of Hg.]

11. Give an account of experiments to show that good absorbers of heat are good radiators.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Attempt not more than SIX questions, of which at least TWO must be from each of GROUPS A and C and ONE from GROUP B.*

## A

1. Show how the laws of reflection and refraction of a parallel pencil of light at a plane surface may be deduced from the wave theory.

2. Obtain the formula for a double convex lens, and show by means of diagrams the relationship between the sizes of the image and object as the latter moves up to the lens from a great distance.

The radii of curvature of the surface of a double convex lens are 20 cm. and 40 cm., and its focal length is 20 cm. What is the refractive index of the glass?

3. Describe the constituent parts of a spectroscope and their functions. State how you would fit it up and show the path of monochromatic light through it. What differences would you observe between the spectra of (a) an incandescent solid, (b) a sodium flame, and (c) the sun?

4. Point out the essential difference between phosphorescence and fluorescence, and describe suitable experiments to observe the phenomena.

### B

5. Using an ebonite rod and flannel, how would you charge a gold-leaf electroscope (a) negatively, (b) positively? How would you show that the electric charges produced on the ebonite and on the flannel when they are rubbed together are equal in magnitude but opposite in sign?

6. Define 'electrostatic potential' and 'capacity'. Describe the construction and action of a condenser, and discuss the factors that determine its capacity.

Two spheres of 2 cm. and 3 cm. radius are charged respectively to potentials 5 and 10. What will be their common potential if they are placed in electrical connexion?

7. Define 'declination' and 'dip'.

At A the total magnetic intensity is 0.5 and the angle of dip  $68^\circ$ , while at B the total intensity is 0.55 and the angle of dip  $72^\circ$ . Compare the horizontal intensities at the two places, given

$$\cos 72^\circ = 0.3090 \text{ and } \cos 68^\circ = 0.3746.$$

### C

8. Describe the construction and mode of action of the lead accumulator. In what respects does an accumulator differ from a Daniell cell?

9. State and explain Faraday's laws of electrolysis.

A tangent galvanometer is connected in series with a copper voltmeter, and a current passed. The galvanometer coil consists of forty-six turns of mean radius 15 cm., and the mean deflection observed is  $40^\circ$ . Find the mass of copper deposited in 15 minutes if  $H = 0.18$  and 1 coulomb deposits 0.00033 gram of copper. [ $\tan 40^\circ = 0.8391$ .]

10. Describe and explain the construction of an apparatus by means of which the rotation of a magnet pole round a straight upright current and of a straight upright current round a magnet pole can be demonstrated.

11. Explain why...

- (a) a charged conductor is found to be discharged on causing the flame of a taper to touch its surface;
- (b) an indefinite amount of charge can be drawn from an electrophorus without violating the principle of conservation of energy;
- (c) a solenoid conveying a current is equivalent to a magnet;
- (d) a lightning conductor protects a building from a lightning discharge.

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions carry equal marks.*

*Only six questions are to be attempted.*

1. What is a 'salt'? How are the salts classified? Give two examples of each class. Has the reaction of a salt anything to do with this classification? To what class does sodium bicarbonate belong, and why?

2. How is pure hydrogen prepared from ordinary zinc and sulphuric acid? What precautions should be taken in the collecting and burning of this gas? What are the properties of hydrogen? What is meant by 'occluded hydrogen'?

3. Explain fully the terms 'oxidation' and 'reduction'. How does chlorine act as an oxidizing agent and hydrogen as a reducing agent? In what class would you place hydrogen peroxide, and why?

4. What is 'hard water'? Why does not soap form lather easily with hard water? How may hard water be softened? How is it that chalk which is almost insoluble in water may be gradually rendered soluble in hard water?

5. What reactions take place when steam is passed over (a) red-hot iron filings, (b) red-hot charcoal? Calculate what volume of gas measured at 765 mm. pressure and  $819^{\circ}\text{C}$ . could theoretically be produced by 1 gram of steam in each case. What would be the effect of passing each of the gaseous products over red-hot copper oxide?

6. How would you prepare and collect a quantity of ammonia gas? What would be the effect of passing ammonia gas into a dilute solution of nitric acid and then evaporating the solution to dryness and heating the solid residue? How is the composition of ammonia determined?

7. How is bleaching powder prepared? Describe its properties and uses. How would you proceed to bleach a piece of coloured cloth with bleaching powder?

8. What is 'white lead'? What is the 'Dutch process' for its manufacture? Give an explanation of the reactions which occur.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions carry equal marks.*

*Only six questions are to be attempted.*

1. How would you prove that air and water contain a common constituent? What is the evidence that in one case this constituent is chemically combined while in the other it merely forms part of a mixture? How would you obtain this common constituent in the pure state from (a) water, (b) air?

2. What is ozone, and how is it prepared? Compare its properties with those of oxygen. Describe its action on (a) potassium iodide, (b) hydrogen peroxide, and (c) lead sulphide.

3. What are the principal ores of aluminium? How is the metal extracted on the commercial scale? What are the chief uses of the metal and its more common salts?

4. How is sulphur dioxide prepared (a) in the laboratory, and (b) on the large scale? What are its uses? What reactions take place when the gas is led into (a) chlorine water, (b) a mixture of nitrogen peroxide and water vapour, (c) nitric acid, (d) sulphuretted hydrogen?

5. Assuming air to contain 21 per cent. by volume of oxygen, what volume of air at  $27^{\circ}\text{C}$ . and 750 mm. pressure will be required for the complete combustion of 60 grams of a paraffin candle of 80 per cent. carbon and 20 per cent. hydrogen? [ $\text{C} = 12$ ,  $\text{O} = 16$ .]

6. Describe the preparation, properties, and uses of the following:—potassium chlorate, cuprous chloride, iodine, acetylene.

7. What is marsh gas, and how is it prepared? Describe experiments for determining its composition. Compare the action of chlorine on marsh gas with that on ethylene.

8. Write notes on:—(a) Faraday's laws of electrolysis, (b) dialysis, (c) soluble glass, (d) negative catalysts, (e) empirical formula.

## PHYSIOLOGY

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Answer any FIVE questions.*

1. Describe the microscopic appearance of bone.
2. Briefly describe the different types of joints in the human body, mentioning an example of each.
3. Give a brief account of rigor mortis.
4. What is clotting of blood? How does it take place?
5. Mention some of the important general properties of blood.
6. Describe the course of the circulation of the blood, starting from the left ventricle.
7. Give a brief account of the act of respiration.
8. Classify food, and mention briefly the importance of each class of food.

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Answer any FIVE questions.*

1. Describe the functions of the liver.
2. What is the composition of urine?
3. Give a brief description of the structure of nerve-cells, axons, and dendrons. Draw a diagram.
4. Name the cranial nerves, and briefly mention the function of each.
5. Describe the effects which follow severance of the spinal cord.
6. Draw a diagram of a section through the eyeball, and indicate the important structures.
7. Describe the course of the sound-waves.
8. Write a short essay on 'Life'.

## BOTANY

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt any FIVE of the questions.*

1. What is 'nucleus'? Describe, with sketches, the various changes it undergoes during the division of a vegetative cell. 20
2. Give a brief account of the movements in plants induced by light. 20
2. Describe, with sketches, the histology of the following tissues:—vessels, sieve-tubes, laticiferous tissues, tracheids, sclerenchyma, collenchyma. State briefly the function they perform in relation to their structure and position in the plant-body. 20
4. What is placenta? Describe the different types of placentation. What section of the ovary will you take to examine each type? Give examples and sketches. 20
5. Describe, with examples and sketches, the various modifications of stem for vegetative propagation. 20
6. State what you know about the process of respiration in plants. 20
7. Give the main characters of the 'natural order' Compositae, with sketches and examples. 20

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt any FIVE of the questions.*

1. Describe, with sketches, ONE exalbuminous dicotyledonous seed, and ONE albuminous monocotyledonous seed that you have examined. 20



2. Describe the life-history of a moss plant, and indicate the limits of the two phases involved in the process. 20
3. Describe the sporophytic phase of a fern plant. How does it differ from a flowering plant? 20
4. Compare and contrast the vegetative body and the reproductive structure of *Spirogyra* with *Mucor*. 20
5. Write short notes, with sketches, on the following:—Epicalyx, Apocarpous, Tetradynamous, Gynobasic, Spikelet. Give ONE example in each case, and state the natural order to which it belongs. 20
6. What do you understand by the expression 'physiologically dry' soil? How are plants adapted in such soil? 20
7. What are systems of classification of plants? Give a brief account of them. 20

## • BIOLOGY

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer only FIVE questions.*

1. Describe a typical vegetable cell. 20
2. Describe the structure of a Pea seed and the mode of its germination. 20
3. Draw a diagram of a typical leaf and label its parts. What are the normal functions of the leaf? 20
4. What do you understand by photo-synthesis? Describe some experiment by which you demonstrate it. 20
5. What do you understand by 'alternation of generations' in the life-history of a plant? Illustrate your answer by reference to the Moss plant or to the Fern plant. 20
6. Describe briefly the life-history of *Mucor*. 20
7. Some Yeast cells are put into a solution of sugar and kept in a warm place. Describe the changes that may take place in (a) the Yeast, and (b) the Solution. 20

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer only FIVE questions.*

1. Describe the main differences between plants and animals. 20
2. Give an account of the life-history of *Monocystis*. 20

3. Draw a diagram of the reproductive system of Leech and label the various parts. 20
4. Draw the external features of Bhukti, and label the various fins and apertures. 20
5. Describe the arterial system of Toad. 20
6. Describe the pelvic-girdle of Guineapig. 20
7. State briefly Darwin's contribution towards the idea of Organic evolution. 20

## GEOGRAPHY

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*N.B.—Draw neat diagrams to illustrate your answers wherever necessary.*

*Answer six questions only, of which Question 1 must be one.*

1. Write an essay on 'earthquake', with special reference to the North Bihar earthquake of 15 January, 1934. 20
2. What do you understand by the International Date Line? Explain clearly how the time of a ship is adjusted when this line is crossed. 16
3. How are tides caused? Describe the tidal phenomena of the Hoogli. 16
4. Discuss the importance of the Nile to Egypt and Sudan and of the Himalayas to India. 16
5. What is a cyclone? Account for the characteristic weather of a cyclone. 16
6. Compare and contrast savanna with steppe as regards geographical position, climate, and vegetation. 16
7. Write short notes on the following:—contour lines, Doldrums, Kuro Siwo, and trade winds. 16
8. Describe and explain the factors which bring about migration of climatic belts. 16
9. What combination of causes account for the formation of artesian basins? 16

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer six questions only, of which Question 1 must be one.*

1. What is 'Wallace's line'? Give a brief description of the characteristic flora and fauna found on each side of the line, and state the conclusions that could be drawn from them. Mention some of the chief islands lying on the western and northern side of the line with the important crops cultivated in each of them. Describe the conditions which are favourable to their growth. 20

2. In what parts of North America are each of the following produced on a large scale:—cotton, wheat, and timber? What geographical factors have made the areas you mention suitable for the production of these articles? 16

3. Discuss the statement, 'Japan is the Britain of the East'. To what extent is it appropriate? 16

4. Compare and contrast Africa and South America as regards the geographical position, physical features, and also the chief products of economic importance. 16

5. Give an account of the economic geography of (a) the Irish Free State, and (b) Bengal. 16

6. Compare the distribution of mineral wealth and manufactures of England with those of France. 16

7. Discuss India under the following heads:—physical features, natural vegetation, manufacturing industries, and sea-ports. 16

8. State geographical and other factors which have led to the growth and importance of the following:—Hamburg, Leh, Hull, Chittagong, Peking, Antwerp, Singapore, and Melbourne. 16

9. Draw a map of South America and insert the important rivers and mountain ranges and also the areas where rubber, wheat, sugar, and cotton are produced. 16

## ZOOLOGY

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only FOUR questions to be attempted.*

1. Describe briefly the methods of cell-division in an animal cell. 25

2. Give the general characters of Protozoa. 25
3. Describe the life-history of Hydra. 25
4. Give the external features of a starfish, and explain how locomotion is effected in this animal. 25
5. Show the apertures of an earthworm with the help of diagrams. 25
6. Compare the genital system of the crayfish with that of the cockroach. 25
7. Give a brief account of the life-history of a fresh-water mussel. 25

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only FOUR questions to be attempted.*

1. Draw a diagram of a transverse section through the pharyngeal region of *Amphioxus*, and label the parts. 25
2. Compare the external characters of an Elasmobranch fish with that of *Bekti*. 25
3. Give an account of the mode of respiration in frog. 25
4. Compare the fore-limb of the pigeon with that of the rabbit. 25
5. Describe the circulation of blood through the heart of the rabbit. 25
6. Write short notes on:—(a) notochord, (b) gizzard, (c) dental formula of the rabbit, (d) *Corpus callosum*, (e) thyroid. 25

## GEOLOGY

*Paper-setters and examiners—* { DR. MANMOHAN CHATTERJEE, B.Sc., A.R.C.S., D.I.C., PH.D.  
LIEUT. SATYACHARAN CHATTERJEE, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Attempt FIVE questions, of which two must be from each group.*

### GROUP A

1. State the physical characters which aid in the identification of a mineral. Which of these are more important in your opinion?
2. Give an account of any ONE of the following groups of minerals:—(a) felspar group, (b) mica group.
3. How would you identify any FIVE of the following minerals:—kaolinite, barytes, haematite, galena, cassiterite, chalcopyrite, diamond? Give an account of the uses of those you select.

4. Define and explain any FOUR of the following terms:—plane of symmetry, axis of symmetry, normal group, crystallographic axes, isomorphism.

#### GROUP B

5. Explain any FOUR of the following terms:—conglomerate, shale, phyllite, gabbro, rhyolite.

6. Give in brief outline the main groups into which the igneous rocks are classified.

7. Give an account of the different modes of occurrence of igneous rocks, with diagrams and examples.

8. How would you distinguish between the following pairs of rocks:—(a) volcanic rock and plutonic rock, (b) schist and gneiss, (c) igneous rock and sedimentary rock, (d) sandstone and quartzite?

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### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Attempt FIVE questions, of which TWO must be from each group.*

#### GROUP A

1. Give an account of the different types of lake basins. What are the characters of lake deposits?

2. Explain, with the help of sketches wherever necessary—hanging valley, river capture, moraine, sand dunes.

3. Write explanatory notes on the following, with the help of explanatory diagrams:—normal fault, hade, downthrow, recumbent fold, outcrop.

4. Classify the different types of mountains, giving sketches and examples.

#### GROUP B

5. What are the distinctive characters of the following groups of fossils:—Foraminifera, Corals, Brachiopods, and Lamellibranchs?

6. What are the main differences between the leading groups of fossils found in the Palaeozoic and in the Mesozoic systems?

7. State what you know of the Dharwar system.

8. Give a brief account of the Gondwana system.

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## B. A. Examination,

1935

### ENGLISH

*Paper-setters—  
Pass &  
Honours*

MR. JYOTISCHANDRA BANERJEE, M.A.  
RAI BAHADUR SATYENDRANATH BHADRA, M.A.  
MR. C. C. BISWAS, C.I.E., M.A., B.L., M.L.A.  
PROF. SUNTIKUMAR CHATTERJI, M.A., D.LIT.  
DR. HARENDRACOOMAR MOOKERJEE, M.A., PH.D.  
PROF. NIRMALKUMAR SIDDHANTA, M.A.(CAL.),  
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### HONOURS

*Examiners—*     {     PROF. JAYGOPAL BANERJEE, M.A.     '  
                               {     REV. A. CAMERON, M.A., B.D.  
                               {     ,,     FATHER F. X. CROHAN, S.J.  
                               {     MR. RAJANIKANTA GUHA, M.A.  
                               {     ,,     J. W. HOLME, M.A.  
                               {     ,,     BEJOYGOPAL MUKHERJEE, M.A.

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Set forth the various conceptions of honour cherished by the important personages of *Henry IV, Part 1*, and show how they reflect their respective characters. 20

*Or*, Analyse the character of Falstaff, and illustrate the statement—'The secret of Falstaff's wit is for the most part a masterly presence of mind, an absolute self-possession which nothing can disturb'. 20

2. *Either*, Discuss the claims of Caesar and Brutus to be regarded as the hero of the play. 20

*Or*, 'Shakespeare loved to draw (a) a great man with a fatal blemish, and (b) a man of noble nature but irresolute.' Discuss this statement with reference to the characters of Caesar and Brutus in *Julius Caesar*.

3. *Either*, Examine and illustrate Palgrave's criticism—'Lamia is truly Greek in its direct lucidity of phrase, in its touches fresh from nature, in its descriptive details subordinated to serious human interest. It is Greek also in its simple sensuousness, which indeed at times, though rarely, passes the line of taste.' 20

*Or*, Point out the difference between the five visions of the Grail as seen by the Holy Nun, Sir Galahad, Sir Percivale, Sir Lancelot, and Sir Bors according to their own peculiar natures and circumstances and the perfection or imperfection of their faith. 20

4. Explain any FOUR of the following extracts with reference to the context, adding notes on points of interest:—

40

- (a) I saw young Harry, with his beaver on,  
His cuisses on his thighs, gallantly arm'd,  
Rise from the ground like feather'd Mercury,  
And vaulted with such ease into his seat,  
As if an angel dropp'd down from the clouds,  
To turn and wind a fiery Pegasus,  
And witch the world with noble horsemanship.
- (b) By being seldom seen, I could not stir  
But, like a comet, I was wonder'd at:  
That men would tell their children, This is he;  
Others would say,—Where?—which is Bolingbroke?  
And then I stole all courtesy from heaven,  
And dressed myself in such humility,  
That I did pluck allegiance from men's hearts,  
Loud shouts and salutations from their mouths,  
Even in the presence of the crowned king.
- (c) The skies are painted with unnumbered sparks,  
They are all fire, and every one doth shine;  
But there's but one in all doth hold his place:  
So, in the world; 'tis furnish'd well with men,  
And men are flesh and blood, and apprehensive;  
Yet in the number, I do know but one  
That unassailable holds on his rank,  
Unshak'd of motion.
- (d) There is a tide in the affairs of men,  
Which, taken at the flood, leads on to fortune;  
Omitted, all the voyage of their life  
Is bound in shallows and in miseries.  
On such a full sea are we now afloat;  
And we must take the current when it serves,  
Or lose our ventures.
- (e) Do not all charms fly.  
At the mere touch of cold philosophy?  
There was an awful rainbow once in heaven;  
We know her woof, her texture; she is given  
In the dull catalogue of common things.  
Philosophy will clip an angel's wings,  
Conquer all mysteries by rule and line,  
Empty the haunted air and gnomed mine—  
Unweave a rainbow, as it erewhile made  
The tender-poison'd Lamia melt into a shade.
- (f) 'Let visions of the night or of the day  
Come, as they will; and many a time they come,  
Until this earth he walks on seems not earth,  
This light that strikes his eyeball is not light,  
But vision—yea, his very hand and foot—  
In moments when he feels he cannot die,  
And knows himself no vision to himself,  
Nor the high God a vision, nor that One  
Who rose again: ye have seen what ye have seen.'  
So spake the King: I knew not all he meant.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**The attention of the plucked candidates is drawn to the alternative questions below.**

1.

*Either,*

18

Relate the circumstances which led to the recall of Fitzwilliam from Ireland, and discuss the nature of Pitt's Irish Policy in the light of the following observation: 'The Government and its policy were entirely exotic and the attempt to root them in Irish soil was a perpetual strife with nature'.

*Or,*

Give your impressions of Pitt as a War Minister, noticing the merits and shortcomings of his War Policy, illustrating, at the same time, the soundness or otherwise of Lord Roseberry's contention: 'Unsupported and overweighted as he (Pitt) was, he could not in any case have succeeded. Nor in all probability could the greatest of War Ministers,—not Chatham, nor Bismarck'.

2. Explain, with reference to the context, *any two* of the following passages:—

12

(a) We do not read that the wisest and the mightiest in Egypt were able to avail, when the light turned to darkness and the rivers to blood.

(b) Our regret must be for ourselves and not for the orators: as few speeches which have produced an electrical effect on an audience can bear the uncoloured photography of a printed record.

(c) If we can fancy Lord Eldon complimented for his performance of the Carmagnole, or Wycherley upon his theology, we can form some idea of the feelings with which Pitt up to 1793 would have regarded such a reputation.

(d) But without such adventitious aids, he stands forth as the negation of cant and humbug, a character valuable then, invaluable now; as an intellectual Titan; and as the quick and visible embodiment of every lovable quality in man.

3.

*Either,*

16

What, according to Gibbon, were the main causes which helped to hold together the various units of the Roman Empire and led to its unwonted prosperity, in the age of the Antonines? How does he attempt to show that in the long peace and public felicity which prevailed during the whole of that period lay 'the latent causes of decay and corruption' which subsequently overtook the Empire?

*Or,*

What, according to Lamb, are the points of difference between the Old and the New Schoolmaster? From your acquaintance with the Essay entitled 'The Old and the New Schoolmaster', try to form an idea of Lamb's *humour*.

4. Explain, with reference to the context, *any two* of the following passages:—

12

(a) Then comes (alas, how rarely!) a genius such as Falstaff's, which restores the power of laughter and transforms the stolid brute



into man. This genius approaches nearly to the divine power of creation, and we may truly say, 'Some for less were deified'.

(b) Nothing comes to him, not spoiled by the sophisticating medium of moral uses. The Universe—that Great Book as it has been called—is to him indeed, to all intents and purposes, a book, out of which he is doomed to read tedious homilies to distasting schoolboys.

(c) To teach that there is no device in the grave, may indeed make the deviceless person more contented in his dulness: but it will make the deviser only more earnest in devising.

5. *Either,* 16

Discuss the following: 'There is not a grander, lovelier figure than the self-wrecked, self-devoted Sidney Carton, in literature or history. The conception of the character shows in its author an ideal of magnanimity and of charity unsurpassed'.

*Or,*

Write a *critique* on *A Tale of Two Cities* in the light of the following observation: 'There is no piece of fiction in which the domestic life of a few simple private people is in such a manner knitted and interwoven with the outbreak of a terrible public event, that the one seems part of the other'.

6. Explain, with reference to the context, *any two* the following passages:— 10

(a) What did all this portend, and what portended the swift hoisting-up of Monsieur Gabelle behind a servant on horseback, and the conveying away of the said Gabelle (double-laden though the horse was), at a gallop, like a new version of the German ballad of Leonora?

(b) A sour wine, moreover, or a souring, for its influence on the mood of those who drank it was to make them gloomy. No vivacious Bacchanalian flame leaped out of the pressed grape of Monsieur Defarge: but, a smouldering fire, that burnt in the dark, lay hidden in the dregs of it.

(c) The Loadstone Rock was drawing him, and he must sail on, until he struck. He knew of no rock; he saw hardly any danger. . . . That glorious vision of doing good, which is so often the sanguine mirage of so many good minds, arose before him, and he even saw himself in the illusion with some influence to guide this raging Revolution that was running so fearfully wild.

7. *Either,* 16

Fully illustrate, by particular references, the following: 'The universal element is the dominant note in the Psalter (*Book of Psalms*), and even in the hard and narrow imprecations and denunciations there is marked an uncompromising protest against prevalent evils in social and national life'.

*Or,*

Show how Job's three friends represent *three different types of character*, and comment, in this connection, on the following: 'One after another, these officious friends take up their argument against Job, and, one after another, they repeat the same commonplaces of their creed'. Also, *briefly* characterize their *creed*.

[N.B.—*Alternatives to Questions 1, 2, 5, and 6, for candidates who appeared at the B. A. Examination of 1934.*]

1. *Either,* 18

Illustrate from *A Letter to the Sheriffs of Bristol* the truth of the following observation: 'It contains a two-fold condemnation and a two-fold vindication'.

Or,

Discuss the following, with particular reference to the three italicized expressions which may be said to sum up Burke's attitude towards the American Question, as dealt with in *A Letter to the Sheriffs of Bristol*: 'Burke had the style of his subjects, the amplitude, the weightiness, the labouriousness, the sense, the high flight, the grandeur proper to a man dealing with imperial themes, the *freedom of nations*, the *justice of rulers*, the fortunes of great societies, the *sacredness of law*'.

2. Explain, with reference to the context, *any two* of the following passages:— 12

(a) I have been deceived, say they, by *Titius* and *Maevius*; I have been the dupe of this pretender or of that mountebank; and I can trust appearances no longer. But my credulity and want of discernment cannot amount to a fair presumption against any man's integrity. A conscientious person would rather doubt his own judgment than condemn his species.

(b) No benefit, no revenue, could be lost by it; something might possibly be gained by its consequences. For, be fully assured, that of all the phantoms that ever deluded the fond hopes of a credulous world, a parliamentary revenue in the Colonies is the most perfectly chimerical.

(c) But it is not the *propriety* of the exercise which is in question. The exercise itself is wisely forbore. Its repose may be the preservation of its existence; and its existence may be the means of saving the constitution itself, on an occasion worthy of bringing it forth.

5. *Either*. 16

Discuss the character of Esmond in the light of the following remark: 'The virtues are all there with Henry Esmond, and the flesh and blood also, so that the reader believes in them. But still there is left a flavour of the character which Thackeray himself tasted when he called him a prig'.

Or,

Fully bring out the sense of the following: 'If one were suddenly, by some stroke of magic, carried back two-hundred years, and placed among all these people (the persons introduced in *Esmond*), one would scarcely feel strange, so real, so familiar, do they appear'.

6. Explain, with reference to the context, *any two* of the following passages:— 10

(a) I was ashamed of my trade when I saw those horrors perpetrated which came under every man's eyes. You hew out of your polished verses a stately image of smiling victory: I tell you 'tis an uncouth, distorted, savage idol; hideous, bloody, and barbarous. The rites performed before it are shocking to think of.

(b) After the illumination, when the love-lamp is put out that anon we spoke of, and by the common daylight we look at the picture, what a daub it looks! what a clumsy effigy! How many men and wives come to this knowledge, think you?

(c) I do not stop to say what adventures he began to imagine, or what career to devise for himself before he had ridden three miles from home. He had not read Monsieur Galland's ingenious Arabian Tales yet; but be sure that there are other folks who build castles in the air, and have fine hopes, and kick them down, too, besides honest Alnaschar.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay on ONE of the following subjects:—

50

(a) Patriotism in English literature.

(b) The despotism of custom.

(c) India's industrial future.

(d) 'We sow a thought and reap an act; we sow an act and reap a habit; we sow a habit and reap a character; we sow a character and reap destiny'.

2. Reproduce in simple English the sense of *one* of the following passages:—

(a) Shall I ever enjoy again those marvellous reveries of past days? Will they ever return to me, those grandiose, immortal, cosmogenic dreams, in which one seems to carry the world in one's breast, to touch the stars, to possess the infinite? Divine moments, hours of ecstasy, when thought flies from world to world, penetrates the great enigma, breathes with a respiration large, tranquil, and profound, like that of the ocean, and hovers serene and boundless like the blue heaven! From the celestial spheres, down to the shell or the moss, the whole of creation is then submitted to our gaze, lives in our breast, and accomplishes in us its eternal work with the regularity of destiny and the passionate ardour of love. What hours, what memories! The traces which remain to us of them are enough to fill us with respect and enthusiasm, as though they had been visits of the Holy Spirit. And then, to fall back again from these heights with their boundless horizons into the muddy ruts of triviality! What a fall! Poor Moses! Thou too sawest undulating in the distance the ravishing hills of the promised land, and it was thy fate nevertheless to lay thy weary bones in a grave dug in the desert! Which of us has not his promised land, his day of ecstasy and his death in exile? What a pale counterfeit is real life of the life we see in glimpses, and how these flaming lightnings of our prophetic youth make the twilight of our dull, monotonous manhood more dark and dreary!

25

(b) One may guess the why and wherefore of a tear, and yet find it too subtle to give any account of. A tear may be the poetical *résumé* of so many simultaneous impressions, the quintessence of so many opposing thoughts! It is like a drop of one of those precious elixirs of the East which contain the life of twenty plants fused into a single aroma. Sometimes it is the mere overflow of the soul, the running over of the cup of reverie. All that one cannot or will not say, all that one refuses to confess even to one's self—confused desires, secret trouble, suppressed grief, smothered conflict, voiceless regret, the emotions we have struggled against, the pain we have sought to hide, our superstitious fears, our vague sufferings, our restless presentiments, our unrealized dreams, the wounds inflicted upon our ideal, the dissatisfied languor, the vain hopes, the multitude of small indiscernible ills which accumulate slowly in a corner of the heart, like water dropping noiselessly from the roof of a cavern—all these mysterious movements of the inner life end in an instant of emotion, and the emotion concentrates itself in a tear just visible on the edge of the eyelid.

For the rest, tears express joy as well as sadness. They are the symbol of the powerlessness of the soul to restrain its emotion and to remain mistress of itself. Speech implies analysis; when we are overcome by sensation or by feeling, analysis ceases, and with it speech and

liberty. Our only resource, after silence and stupor, is the language of action—pantomime. Any oppressive weight of thought carries us back to a stage anterior to humanity, to a gesture, a cry, a sob, and at last to swooning and collapse. . . . And intense joy? It also withdraws into itself and is silent. To speak is to disperse and scatter.

3. Express in simple prose the sense of ONE of the following:— 25

(a) The wind of change for ever blows 25

Across the tumult of our way,  
Tomorrow's unborn griefs depose  
The sorrows of our yesterday.  
Dream yields to dream, strife follows strife,  
And Death unweaves the webs of Life.

For us the travail and the heat,  
The broken secrets of our pride,  
The strenuous lessons of defeat,  
The flower deferred, the fruit denied;  
But not the peace, supremely won,  
Lord Buddha, of thy lotus-throne.  
With futile hands we seek to gain  
Our inaccessible desire,  
Diviner summits to attain,  
With faith that sinks and feet that tire;  
But nought shall conquer or control  
The heavenward hunger of our soul.

(b) When I consider Life and its few years—

A wisp of fog betwixt us and the sun;  
A call to battle, and the battle done  
Ere the last echo dies within our ears;  
A rose choked in the grass; an hour of fears;  
The gusts that past a darkening shore do beat;  
The burst of music down an unlistening street—  
I wonder at the idleness of tears.  
Ye old, old dead, and ye of yesternight,  
Chieftains, and barbs, and keepers of the sheep,  
By every cup of sorrow that you had,  
Loose me from tears, and make me see aright  
How each hath back what once he stayed to weep;  
Homer his sight, David his little lad!

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Either, 'Shakespeare himself not Hamlet is the marvel. There are millions of Hamlets but one Shakespeare.' Discuss. 15

Or, How do you explain the popularity of *Hamlet* with the gallery as well as with the stalls, with the village audience in a barn as with an audience of academics?

2. Either, What reasons can you advance for holding the opinion that *Samson Agonistes* is 'the swan song of a mighty genius'? 14

Or, Comment on the Greek character of *Samson Agonistes*.

3. Either, What circumstances led to the writing of *Prothalamion*? What imagery forms the basis of the poem? What effect is produced

through closing each stanza with the same line? What matter in the poem touches upon the poet's personal history? 14

Or, 'When we say that *Adonais* is worthy of its subject, we have given it a very high eulogy; when we add that it is worthy to stand by the side of *Lycidas* as the greatest of English elegies, we have suggested a very severe test which it can endure without injury.' Discuss.

4. Either, What is your conception of the philosophy of life of Emily Brontë? Do you find any similarity between it and the central idea of Browning's *Prospice*? Give illustrative references. 14

Or, Write a short note on the lyrics of Tennyson, illustrating your answer by quotations from or references to your text.

5. Annotate with reference to the context any THREE of the following passages :— 18

(a) What, my young lady and mistress! By'r lady, your ladyship is nearer to heaven than when I saw you last, by the altitude of a chopine. Pray God, your voice, like a piece of uncurrent gold, be not cracked within the ring.

(b) So Virtue given for lost,  
Depressed, and overthrown, as seemed,  
Like that self-begotten bird  
In the Arabian woods embost,  
That no second knows nor third,  
And lay erewhile a holocaust,  
From out her ashy womb now teemed,  
Revives, reflowerishes, then vigorous most  
When most unactive deemed;  
And, though her body die, her fame survives,  
A secular bird, ages of lives.

(c) The Pilgrim of Eternity, whose fame  
Over his living head like Heaven is bent,  
An early but enduring monument,  
Came, veiling all the lightnings of his song  
In sorrow; from her wilds Ierne sent  
The sweetest lyrist of her saddest wrong,  
And love taught grief to fall like music from his tongue.

(d) Poet of the happy Tityrus  
piping underneath his beechen bowers;  
Poet of the poet-satyr  
whom the laughing shepherd bound with flowers;  
Chanter of the Pollio, glorying  
in the blissful years again to be,  
Summers of the snakeless meadow,  
unlaborious earth and oarless sea.

6. Compare and contrast the two following poems. Which of them do you prefer, and why? Give the substance of ONE of them :— 25

*On the Grasshopper and Cricket.*

(a) The poetry of earth is never dead :  
When all the birds are faint with the hot sun,  
And hide in cooling trees, a voice will run  
From hedge to hedge about the new-mown mead.  
That is the Grasshopper's—he takes the lead  
In summer luxury,—he has never done  
With his delights; for when tired out with fun,  
He rests at ease beneath some pleasant weed.

The poetry of earth is ceasing never :

On a lone winter evening, when the frost  
Has wrought a silence, from the stove there shrills  
The Cricket's song, in warmth increasing ever,  
And seems to one in drowsiness half lost,  
The Grasshopper's among some grassy hills.

- (b) Green little vaulter in the sunny grass,  
Catching your heart up at the feel of June,  
Sole voice that's heard amidst the lazy noon,  
When even the bees lag at the summoning brass;  
And you, warm little housekeeper, who class  
With those who think the candles come too soon,  
Loving the fire, and with your tricksome tune  
Nick the glad silent moments as they pass;  
Oh sweet and tiny cousins, that belong  
One to the fields, the other to the hearth,  
Both have your sunshine; both, though small, are strong  
At your clear hearts; both seem given to earth  
To sing in thoughtful ears this natural song :  
Indoors and out, summer and winter,—Mirth.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain, with reference to the context, THREE of the following passages :— 24

(a) Music is sound, freed even from meaning; the notes are themselves, without reference to any objects or ideas; and so rhythm in music is more masterful than in any speech. And the effect of rhythm on us is to give our minds the same freedom from past and future and the compulsion of necessity.

(b) See again that speech of humanity and poesy; when upon the bleeding of his wounds, he called unto him one of his flatterers, that was wont to ascribe to him divine honour, and said, *Look this is very blood; this is not such a liquor as Homer speaketh of, which ran from Venus' hand, when it was pierced by Diomedes.*

(c) A poet who has far more in common with the range of the essayist is Robert Browning, and there are many of his poems, though not perhaps his best, where his frank amassing of grotesque detail, his desire to include rather than exclude the homelier sorts of emotion, his robust and not very humorous humour, make him an impressionist rather than a lyricist.

(d) It is a theme so common to extol a private life, not taxed with sensuality and sloth, in comparison and to the disadvantage of a civil life, for safety, liberty, pleasure, and dignity, or at least freedom from indignity, as no man handleth it but handleth it well; such a consonancy it hath to men's conceits in the expressing, and to men's consents in the allowing.

(e) One lovely pastoral valley is not superseded by another, nor a statue of Praxiteles by a statue of Michael Angelo. These things are separated not by imparity, but by disparity. They are not thought of as unequal under the same standard, but as different in kind, and if otherwise equal, as equal under a different standard.

2. *Either*, Write a short essay on 'The Dignity of Learning', bringing out Bacon's ideas on the subject. 17

Or, Write a note on Bacon's style, and illustrate your answer with references to his *Advancement of Learning*.

3. Answer TWO of the following :—

17+17

(a) Discuss, with special reference to Robert Lynd, whether humour can be introduced in reflective essays without producing incongruity.

(b) Bring out Symonds's ideas on 'personal style', illustrating them from TWO of the essayists included in *Cumberlande*.

(c) Write a note on the critical value of some of the ideas in *The Times Literary Supplement* Review of Abercrombie's *Poetics*, indicating whether you agree with them.

4. Give the substance of ONE of the following passages :—

25

(a) Of all inanimate objects, of all men's creations, books are the nearest to us, for they contain our very thought, our ambitions, our indignations, our illusions, our fidelity to truth, and our persistent leaning towards error. But most of all they resemble us in their precarious hold on life. A bridge constructed according to the rules of the art of bridge-building is certain of a long, honourable and useful career. But a book as good in its way as the bridge may perish obscurely on the very day of its birth. The art of their creators is not sufficient to give them more than a moment of life. Of the books born from the restlessness, the inspiration, and the vanity of human minds, those that the Muses would love best live more than all others under the menace of an early death. Sometimes their defects will save them. Sometimes a book fair to see may have no individual soul. Obviously a book of that sort cannot die. It can only crumble into dust. But the best of books drawing sustenance from the sympathy and memory of men have lived on the brink of destruction, for men's memories are short, and their sympathy is, we must admit, a very fluctuating, unprincipled emotion.

(b) It is natural and proper enough that the masses of explosive ammunition stored up in detective stories and the replete and solid sweet-stuff shops which are called sentimental novelettes should be popular with the ordinary customer. It is not difficult to realize that all of us, ignorant or cultivated, are primarily interested in murder or love-making. The really extraordinary thing is that the most appalling fictions are not actually so popular as that literature which deals with the most undisputed and depressing facts. Men are not apparently so interested in murder and love-making as they are in the different forms of latch-key which exist in London or the time that it would take a grass-hopper to jump from Cairo to the Cape. The enormous mass of fatuous and useless truth which fills the most widely-circulated papers, such as *Tit-Bits*, *Science Siftings*, and many of the illustrated magazines, is certainly one of the most extraordinary kinds of emotional and mental pabulum on which man ever fed. It is almost incredible that these preposterous statistics should actually be more popular than the most blood-curdling mysteries and the most luxurious debauches of sentiment. In the case of cheap detective stories and cheap novelettes, we can most of us feel, whatever our degree of education, that it might be possible to read them if we gave full indulgence to a lower and more facile part of our natures; at the worst we feel that we might enjoy them as we might enjoy hull-baiting or getting drunk. But the literature of information is absolutely mysterious to us.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## Part I. History of English Literature

*Answer Question 8 and two other questions from this part.*

1. Write a brief note on the form and contents of Old English (Anglo-Saxon) poetical literature prior to 1150. 16
2. Write notes on four of the following:—*The Old English Chronicle*; Geoffrey of Monmouth; *Ormulum*; Robert Mannyng of Brunne; *The Kingis Quair*; Sir Thomas Malory; Sir John Mandeville; Bishop Percy's *Reliques of Ancient English Poetry*. 16
3. Give a short account of the principal works of the contemporaries of Chaucer, and discuss the value of their contribution to English literature. 16
4. Give a short history of the English novel from its beginnings up to the end of the eighteenth century. 16
5. Write a brief survey of English poetry of the Elizabethan Age. 16
6. What do you know about the 'Romantic Movement' in English literature? Discuss the contribution of the more important poets who took part in it. 16
7. Give a critical appreciation of two of the following writers:—Alexander Pope, Jonathan Swift, Oliver Goldsmith, Edward Gibbon, Alfred Tennyson, William Makepeace Thackeray. 16
8. *Either*, Write a short essay on the dramas of Shakespeare. 18  
*Or*, Write brief notes on THREE of the following:—the Poet-laureate-ship; the Pre-Raphaelite Poets; the Oxford Movement; the *Pickwick Papers*; *Modern Painters*; *The Ring and the Book*; *Vathek*; *Robinson Crusoe*; *The Pilgrim's Progress*; Thomas Chatterton; *Sonnets from the Portuguese*.

## Part II. History of the English Language

*Answer Question 7 and two other questions from this part.*

1. Indicate the relationship of English with the languages of Europe, and explain how the English language came to Britain and spread in the country. 16
2. Describe fully the effect of the Norman Conquest on the English language. 16
3. Show how a standard literary English took its rise in the Middle English period. 16
4. Indicate how the Old English noun declension has been simplified in New or Modern English. 16
5. Write a short historical note on the English verb. 16
6. Write a short essay on the characteristics of Modern English. 16
7. Write philological notes on six of the following words and forms:—*kine* (plural of *cow*), *feed* (from *food*), *any*, *better* (comparative of *good*), *'em* (as in *I told 'em so*), *elder* (comparative of *old*, beside *older*), *she*, *themselves*, *whether*, *its*, *clad*, *yclept*, *wot*, *must*, *could*, *forlon*.



# PASS

## FIRST PAPER

Examiners—	{	Mr. AMULYACHANDRA AIKAT, M.A.
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		„ SURESCHANDRA RAY, M.A.
		„ AMIYAKUMAR SIN, M.A.
		„ SURESCHANDRA SENGUPTA, M.A.
		„ ANANDAKRISHNA SINHA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Discuss Shakespeare's use of the supernatural in *Julius Caesar*. 14

*Or*, Write a short note on the 'citizens' of ancient Rome, as depicted in *Julius Caesar*; and show that they represent rather an Elizabethan mob than the plebs of Roman history. 14

2. *Either*, Illustrate Brutus's stoicism, Cassius's epicureanism, and Casca's cynicism. Show that under stress of circumstances, these personages are sometimes led to act contrary to their philosophical tenets. 18

*Or*, Sketch the character of Hotspur. Why is he called 'an epic hero'? 18

3. *Either*, How is Prince Henry's final transformation foreshadowed in *King Henry the Fourth, Part I*? 14

*Or*, Point out (briefly) the salient features in the characters of any two of the following:—(a) Douglas, (b) Glendower, (c) Lady Percy. 14

4. *Either*, What are the moral and spiritual lessons inculcated by the idyll of *The Holy Grail*? Is the idyll deficient in unity? 18

*Or*, Narrate (briefly) the story of *The Sick King in Bokhara*, and add a short note on the character of the King. 18

5. Explain any FOUR of the following passages:— 36

(a) They wound my thoughts worse than thy sword my flesh:  
But thought's the slave of life, and life time's fool;  
And time, that takes survey of all the world,  
Must have a stop.

(b) A barren-spirited fellow; one that feeds  
On abject ords, and imitations,  
Which, out of use and staled by other men,  
Begin his fashion: do not talk of him,  
But as a property.

(c) *Falstaff*. Indeed, you come near me now, Hal; for we that take purses go by the moon and the seven stars, and not by Phoebus, he, 'that wandering knight so fair'. And, I prithee, sweet wag, when thou art king, as, God save thy grace,—majesty I should say, for grace thou wilt have none,—

*Prince*. What, none?

*Falstaff*. No, by my troth, not so much as will serve to be prologue to an egg and butter.

- (d) For he who hath in turn run through  
All that was beautiful and new,  
Hath nought to hope, and nought to leave;  
And, save the future, (which is view'd  
Not quite as men are base or good,  
But as their nerves may be endued,)  
With nought perhaps to grieve.
- (e) O hateful error, melancholy's child,  
Why dost thou show to the apt thoughts of men  
The things that are not? O error, soon conceived,  
Thou never comest unto a happy birth,  
But kill'st the mother that engender'd thee!
- (f) Said Hóseyñ : 'God gives each man one life, like, a lamp, then  
gives  
That lamp due measure of oil : lamp lighted—hold high, wave wide  
Its comfort for others to share! once quench it, what help is left?  
The oil of your lamp is your son : I shine while Muléykeh lives.  
Would I beg your son to cheer my dark if Muléykeh died?  
It is life against life : what good avails to the life-bereft?

## SECOND PAPER

Examiners—	{	MR. GIRIJASANKAR BHATTACHARYYA, M.A.
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		„ NARENDRANATH CHATTERJEE, M.A.
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		„ GOPALCHANDRA MITRA, M.A.
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		„ ARTHUR MOWAT, M.A.
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		MR. SUHASCHANDRA RAY, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Answer one question from either Group A or Group B :— 18

## GROUP A

(a) 'Pitt ruled during the convulsion of a new birth at the greatest epoch in history since the coming of Christ, and was on the whole not unequal to it.'

Do you agree with the opinion expressed above? Give reasons for your answer.

(b) 'Had it not been for Fox's character and its faults Pitt could certainly not have retained, and possibly could not have obtained, the premiership.'

Bring out the principal distinguishing features in the character of Pitt and Fox, and justify, if possible, the remark quoted above.

## GROUP B

(a) 'Burke will always be read with delight and edification, because in the midst of discussions on the local and the accidental, he scatters apophthegms that take us into the regions of lasting wisdom.'

Discuss and justify, if possible, the remark quoted above, giving reference to Burke's Letters to the Sheriff of Bristol.

(b) Write a short note on Burke as a practical politician, illustrating your answer by references to his remarks on the true end of legislature and his defence of party.

2. Explain, with reference to the context, *any two* of the following passages—the two passages must be selected from one of the two groups:—

#### GROUP A

(a) 'I will not barter English commerce for Irish slavery; that is not the price I would pay, nor is the thing I would purchase.'

(b) While he watched over the Treasury, like Sully, he conducted his own affairs like Charles Surface.

(c) 'Europe is not to be saved by any single man. England has saved herself by her exertions and will, as I trust, save Europe by her example.'

#### GROUP B

(a) General rebellions and revolts of a whole people never were *encouraged*, now or at any time. They were always *provoked*.

(b) Civil freedom is not, as many have endeavoured to persuade you, a thing that lies hid in the depth of abstruse science.

(c) We are not too nicely to scrutinize motives as long as action is irreproachable. It is enough (and for a worthy man perhaps too much) to deal out its infamy to convicted guilt and declared apostasy.

3. Answer *any one* of the following:—

16

(a) Explain and illustrate from the essay read by you: 'The cardinal doctrine which runs through all the teaching of Ruskin is that men—men and not the works of men, men and not the materials, or machines, or gold or even pictures or statues or public buildings—should be the prime object of our care, and reverence, and love.'

(b) 'The strength of Japan, like the strength of her ancient faith, needs little material display: both exist where the deepest real power of any great people exists,—in the Race Ghost.'

Discuss in brief how Lafcadio Hearn attempts to justify this opinion.

(c) Discuss Huxley's views about purely literary education. Do you consider the scheme outlined by him in the Essay studied by you to be feasible and practicable in this country?

4. Answer *one* question from *either* Group A or Group B:—

16

#### GROUP A

(a) 'In *A Tale of Two Cities* the weight is laid on situation and incident—the interest pounding the characters in its own mortar and beating their interest of them.'

*Discuss.*

(b) Whom do you consider to be the hero in *A Tale of Two Cities*? Give reasons for your answer.

#### GROUP B

(a) 'There are few productions in the world of fiction which exhibit the finish of *Esmond*, for the author has not only drawn his characters with unusual skill, but delighted the reader with repeated bursts of natural, unaffected eloquence, in language sedulously borrowed from the age of Steele and Addison.'

*Discuss.*

(b) Do you agree with the following opinion expressed about *The History of Henry Esmond*?—

'The interest of the story to artists, and I venture to think to the reader as well, centres in Beatrix and her mother, with Esmond between the two, like Garrick between comedy and tragedy.'

Give reasons for your answer.

5. 'It is clear that many of them (the Psalms) are intended to express the feelings and aspirations of the faithful community and of the struggling and suffering Jewish nation.'

*Elucidate.*

16

*Or,*

Write a short note on the teachings sought to be conveyed in the Book of Job.

6. Explain, with reference to the context, *any three* of the following, taking at least *one* from each group:—

18

#### GROUP A

(a) The superstition of the people was not embittered by any mixture of theological rancour; nor was it confined by the chains of any speculative system.

(b) Had he asked of me, what song the Sirens sang, or what name Achilles assumed when he hid himself among women, I might, with Sir Thomas Browne, have hazarded a 'wide solution'.

(c) But we may say of him, as Byron says of Venice, that his very vices are of the gentler sort.

#### GROUP B

(a) Are thy days as the days of man? are thy years as man's days, that thou inquirest after mine iniquity, and search after my sin?

(b) But indeed, at that time, putting to death was a recipe much in vogue with all trades and professions, and not least of all with Tellsons.

(c) It is an error, surely, to talk of the simplicity of youth. I think no persons are more hypocritical, and have a more affected behaviour to one another, than the young. They deceive themselves and each other with artifices that do not impose upon men of the world; and so we get to understand truth better, and grow simpler as we grow old.

### THIRD PAPER

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*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Give the substance of ONE of the following passages:—

25

(a) Among the many who have enforced the duty of giving, I am surprised there are none to inculcate the ignominy of receiving; to show that by every favour we accept we in some measure forfeit our native

freedom; and that a state of continual dependence on the generosity of others is a life of gradual debasement.

Were men taught to despise the receiving of obligations with the same force of reasoning and declamation that they are instructed to confer them, we might then see every person in society filling up the requisite duties of his station with cheerful industry, neither relaxed by hope, nor sullen from disappointment.

Every favour a man receives in some measure sinks him below his dignity; and, in proportion to the value of the benefit, or the frequency of its acceptance, he gives up so much of his natural independence. He, therefore, who thrives upon the unmerited bounty of another, if he has any sensibility, suffers the worst of servitude: the shackled slave may murmur without reproach, but the humble dependant is taxed with ingratitude upon every symptom of discontent; the one may rave round the walls of his cell, but the other lingers in all the silence of mental confinement. To increase his distress, every new obligation but adds to the former load, which kept the vigorous mind from rising; till at last, elastic no longer, it shapes itself to constraint, and puts on habitual servility.

It is thus with a feeling mind: but there are some who, born without any share of sensibility, receive favour after favour, and still cringe for more; who accept the offer of generosity with as little reluctance as the wages of merit, and even make thanks for past benefits an indirect petition for new: such, I grant, can suffer no debasement from dependence, since they were originally as vile as was possible to be; dependence degrades only the ingenuous but leaves the sordid mind in pristine meanness. In this manner, therefore, long continued generosity is misplaced, or it is injurious; it either finds a man worthless, or it makes him so; and true it is, that the person who is contented to be often obliged, ought not to have been obliged at all.

(b) In a community of hunters or of shepherds, every man easily and necessarily becomes a soldier. His ordinary avocations are perfectly compatible with all the duties of military service. However remote may be the expedition on which he is bound, he finds it easy to transport with him the stock from which he derives his subsistence. The whole people is an army; the whole year a march. Such was the state of society which facilitated the gigantic conquests of Attila and Tamerlane. But a people which subsists by the cultivation of the earth is in a very different situation. The husbandman is bound to the soil on which he labours. A long campaign would be ruinous to him. Still his pursuits are such as give to his frame both the active and the passive strength necessary to a soldier. Nor do they, at least in the infancy of agricultural science, demand his uninterrupted attention. At particular times of the year he is almost wholly unemployed and can, without injury to himself, afford the time necessary for a short expedition. Thus the legions of Rome were supplied during its earlier wars. The season during which the fields did not require the presence of the cultivators sufficed for a short inroad and a battle. These operations, too frequently interrupted to produce decisive results, yet served to keep up among the people a degree of discipline and courage which rendered them not only secure, but formidable. The archers and hillmen of the middle ages, who, with provisions for forty days at their backs, left the fields for the camp, were troops of the same description.

2. Give the substance of ONE of the following poems:—

25

(a) *At His Father's Tomb.*

But thou would'st not alone  
Be saved, my father! alone  
Conquer and come to thy goal,  
Leaving the rest in the wild.

We were weary, and we  
 Fearful, and we, in our march,  
 Fain to drop down and to die.  
 Still thou turnedst, and still  
 Beckonedst the trembler, and still  
 Gavest the weary thy hand!  
 If, in the paths of the world,  
 Stones might have wounded thy feet,  
 Toil or dejection have tried  
 Thy spirit, of that we saw  
 Nothing! to us thou wert still  
 Cheerful, and helpful, and firm.  
 Therefore to thee it was given  
 Many to save with thyself;  
 And, at the end of thy day,  
 O faithful shepherd! to come,  
 Bringing thy sheep in thy hand.

- (b) Break, break, break,  
     On thy cold grey stones, O Sea!  
 And I would that my tongue could utter  
     The thoughts that arise in me.  
 O well for the fisherman's boy,  
     That he shouts with his sister at play!  
 O well for the sailor lad,  
     That he sings in his boat on the bay!  
 And the stately ships go on  
     To their haven under the hill;  
 But O for the touch of a vanish'd hand,  
     And the sound of a voice that is still!  
 Break, break, break,  
     At the foot of thy crags, O Sea!  
 But the tender grace of a day that is dead  
     Will never come back to me.

3. Write an essay on ONE of the following subjects:—

50

- (a) An ideal university.  
 (b) Aviation in peace and war.  
 (c) 'Travel is a part of education' (BACON).

## SANSKRIT—HONOURS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain fully either in Sanskrit or in English ONE of the following extracts, and write grammatical notes on the underlined words :— 8+5

(a) अनन्यगुणास्तव केन केवलः पुराणमूर्त्तैर्महिमावगम्यते ।  
मनुष्यजन्मापि सुरासुरान् गुणैर्मवान् भवोच्छेदकरैः करोत्यधः ॥

(b) विभिन्नश्रवः कलुषो भवन् मुहुर्मदेन दन्तौव मनुष्यधर्मणः ।  
निरस्तगाश्चौर्यमपास्तपुण्यकं प्रकम्पयामास न मानसं न सः ॥

2. Translate into English any THREE of the following extracts :— 12

(a) आरभन्तेऽन्यसेवाज्ञाः कामं व्यथा भवन्ति ते ।  
महाराग्नाः कृतघ्नयस्तिष्ठन्ति च निगाकुलाः ॥

(b) विपचमखिलीकृत्य प्रतिष्ठा खलु दुर्लभा ।  
अनीत्वा पङ्कतां धूलिमुदकं नावतिष्ठते ॥

(c) तेजः चमा वा नैकान्तं कालज्ञस्य महीपतेः ।  
नैकमोजः प्रसादी वा रसभावविदः कवेः ॥

(d) विधाय वैरं मामर्षे नरोऽगौ य उपासते ।  
प्रक्षिप्योदर्विषं कचे श्रते तेऽभिमारुतम् ॥

(i) Account for आत्मनेपद in अवतिष्ठते . 3

(ii) Decline the base of नरः in षष्ठी in (d).

3. Give the purport of the following, referring to the context in each case :— 12

(a) तेजस्त्रिमध्ये तेजस्वी दधीयानपि गण्यते ।

(b) बहूमूलस्य मूलं हि महत् वैरतरोः स्त्रियः ।

(c) क्रियासमभिहारेण विराध्यन्तं चमेत कः ॥

4. Scan and name the metre in :— 4

श्लभतां लभतामसुहृद्गणः ॥

5. (a) Describe the composition of the sacred threads of the different castes. 5

(b) Can a Brāhmaṇa receive Vedic lessons from a non-Brāhmaṇa ? Describe the manner of respect he is to show him. 5

## 6. Translate into English :—

12

- (a) तं चेदभ्युदियात् सूर्यः शयानं कामचारतः ।  
निष्कीचेद् वाय्वविज्ञानाज्जपद्गुपवसिद्दिनम् ।
- (b) सम्मानाद् ब्राह्मणो निव्यमुदविजित विषादिव ।  
अमृतस्यैव चाकाङ्क्षे दवमानस्य सर्वतः ॥
- (c) नापृष्टः कस्यचिद् ब्रूयान्न चान्धायिन पृच्छतः ।  
जानन्नपि हि मेधावौ जडवस्त्रौक आचरेत् ॥

## 7. Translate into English :—

(a) श्रुतिसम्प्रदायद्वारा धर्माधर्मव्यवस्थापकतया जगत्प्रतिष्ठादत्तानां भवादृशां दर्शनं  
कस्य न ज्ञायम् । 3

(b) अपेक्षायां व्याख्यासन्देहे वा सुन्यन्तरविहतं मन्वर्धमन्वयामहे न तु स्फुटं मन्वय  
श्रुत्यन्तरदर्शनात् अन्यथा कुर्मः । अतएव जपापेक्षायां गीतमवचनात् राविदीजपः अभ्युपेय एव  
न तु उभयव स्फुटं मनूतौ दिनोपवासजपौ अपाकुर्मः । 6

## 8. Translate into Sanskrit :—

25

(a) So they went into the forest where no man lived and there they hid. Tall trees put out their great branches and made a black shade. The slender-legged deer ran to and fro in the glades. Bears stole in and out of the bushes. Snakes looked out of their holes. Birds of strange shape flew from tree to tree. The five princes felt a deep thirst, but nowhere could they see the pleasant gleam of water.

(b) The crane was no more seen. But a voice was heard to say : "Know, oh noble-hearted prince, that the Yaksha you saw as a crane was none other than Dharma, the mighty lord of justice himself. You have pleased him and you have pleased all the gods. You have chosen Nakula before your own dearest brother, and you wished to be just rather than to do what would best please your own soul."

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Describe, with apt references and quotations, the character of Dugyanta as a keen observer of his own mental states as also of other things in nature. 15

*Or*, Explain the dramatic utility of the chitradarśana episode in *Uttara-rāmcharitam*, and support your statements with apt quotations. 15



2. Explain in Sanskrit any TWO stanzas, selecting ONE only from each of the following groups, giving reference to the context in each case :—16

GROUP A

- (a) चामचुमकपोलमाननमुरः काटिन्धसुकुसुमनं -  
मध्यः क्लान्ततरः प्रकामविनताः सौ कृषिः पाण्डुरा ।  
शीघ्रा च मिथदर्शना च मदनक्रिष्टेयमालक्ष्यते  
पवाणामिव शोषणेन मरुता स्पृष्टा लता साधवौ ॥
- (b) गम्याणि वीक्ष्य मधुगन्धं निश्चयं शब्दान्  
पर्युत्सुकीभवति यत् सुखितोऽपि जन्तुः ।  
तच्च तसा स्मरति नृनमबोधपूर्वम् -  
भावस्थिराणि जननान्तरमौहदानि ॥

GROUP B

- (a) चिराद्देगारम्भी प्रसृत इव तीव्रा विषरसः  
कुतस्थित् संवेगात् चलित इव शल्यस्य शकलः ।  
व्रणी रुद्धयन्त्रिः स्फुटित इव हन्यमणिं पुन-  
र्धनाभूतः शोका विकल्यति मां मूर्च्छयति च ॥
- (b) अपत्ये यत्तादृग् दुरितमभवत् तेन महता  
विषक्तकीत्रेण व्रणितहृदयेन व्यथयता ।  
पटुर्धारावाही नव इव चिरेणापि हि न मे  
निष्कान् मर्माणि क्रकच इव मन्युर्विरमति ॥

Write full grammatical notes on the underlined words in Group A (a) and (b), and in Group B (a) and (b). The relevant *sūtras* must always be cited. 5+3+5+2+2

3. Reproduce from memory ONE of the most beautiful *śloka*s EITHER from *Śākuntalā* OR from *Uttararāmacharitam*, and annotate it in English so as to bring out clearly its special literary excellence. 8

4. Either, Compare or contrast Kālidāsa and Bhavabhūti as poets of love, clearly indicating their points of similarity or of difference, and support your answer with apt quotations. 12

Or, Compare or contrast Kālidāsa's and Bhavabhūti's respective approaches to nature, supporting your answer with apt quotations. 12

5. Translate either of the following two verses into English, with an introductory note describing the context in which it appears :—

- (a) चूडामण्डलवन्धनं तरलयत्याकृतगी वेपथुः 5

किञ्चित् कीकनदण्डस्य सदृशे नेत्रे स्वयं रम्यतः ।

धरे, कान्तिमकाशताच्छ्रवितयोर्मङ्गलेन वक्त्रं भुवी-

सम्पत्सौत्कटलान्धनस्य कमलसौन्दर्यान्धनस्य च ॥

(b) उपायानां भावादविरतविनीदव्यतिकरैः ।

विमर्देर्बोराणां जगति जगिताव्यङ्ग्यतरसः ।

वियोगो मुग्धाच्याः स खलु रिपुघातावधिरभूत्

कथं तृष्णीं सखीं निरवधिरिदाणीन् विरहः ॥

Write a grammatical note on मुग्धाच्याः ।

2

6. Translate into Sanskrit :—

25

(a) A mere girl, she had sacrificed her whole future, the world and those who had brought her up and loved her. All alone with him, she had come to the wild forest. And he had been all in all to her. He had satisfied her heart's desires, its endless longings, its undying hopes. He had filled her whole life with bliss from beginning to end. She could not possibly have been happier.

(b) We remained there pale and motionless, awaiting some dreadful signal, with ears intent and beating hearts, convulsed by the slightest sound. Then the dog began to roam about the room, sniffing the walls and whining incessantly. The brute was driving us mad. At last the peasant, my guide, seized him in a sort of paroxysm of angry terror and, throwing open a door, flung him out into a small courtyard.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any Two of the following passages : 30

(a) सा च मे जन्मतः प्रवृत्ति एकासनशयनपानाशना परं प्रेमस्थानमखिलविश्वम्भ्राम् द्वितीयमिव हृदयं बालमिवम् ; एकत्र तया मया च नृत्यगीतादिकलासु कृताः परिचयाः, शिशुजनी-चितामिश्रं क्रीडाभिः अपनीतो बालभावः । सा च अमुनैव मदीयेन हतवृत्तानेन समुपजातशोका नियमकार्षीत्—“नाहं कथञ्चिदपि आत्मनः पाप्मिं यादृशस्थामौति” सखीजनस्य पुरतः सशपथम-भिहितवती—“यदि कथमपि मामनिष्कन्तीमपि बलात् तातः कदाचित् कश्चिच्च दातुमिच्छति, तदाहमनश्नेन वा हुताशनेन वा रक्त्वा वा नियतमात्मानमुत्सृज्यामीति ।” तातोऽपि एकापत्यतया चातिप्रियतया च न शक्तः किञ्चिदपि तामभिधातुम् ।

(b) अथैकदा वामदेवः विदलिष्यमानविषाद्यं कुमारचयं गाढमालिङ्गामितसत्यवाक्येन विह्विताशीरभाषत—“भूवल्लभ ! भवदीय मनोरथफलमिव सख्यल्लावण्यं तारुण्यं तुलामित्री भवत्पुत्रीऽनुभवति । सद्यश्चरसमेतस्य नृनमेतस्य दिग्विजयारम्भ एव । तदस्य सकलकर्मसङ्घस्य राजवाङ्मनस्य दिग्विजयप्रयाणं क्रियन्तामिति ।” कुमारो मारोभिरामो रामास्त्रपौरुषा रूपा भञ्जीकृताश्वी रथोपहसितसमोरणा रणाभियानेन यानेनाभ्युदयाग्रं राजानमकार्षुः । तस्माच्चिन्त्य-मितरेषां विधाय समुचितां बुधिसुपदिश्य शुभे मुहूर्ते उपरिवारं कुमारं विजयाय विससर्ज ।

(c) रुचि ! प्रतिपाद्य, अहमपि भवन्मनुयास्यामि, न शक्नोमि भवता विना चक्षमप्यवस्थातुमेकाकी ; कथमपरिचित इव, अदृष्टपूर्वं इव, अद्य मामेकपदे उत्सृज्य प्रयासि ? कुतस्तवैयमतिनिष्ठुरता, कथय त्वद्वृत्ते क्व गच्छामि, कं याचे, कं शरणासुपैमि ? अन्धोऽपि संवृत्तः, शृणा मे दिशे जाताः, निरर्थकं औचितं, निःसुखाश्च लोकाः । केन सङ्गपरिधमामि, कमासुपामि ? उत्तिष्ठ, देहि मे विलपतः प्रतिवचनम्, क्व तन्ममोपरि सुष्ठुमेव ? क्व सा क्षितपूर्व्याभिभाषिता ?

2. Answer any THREE of the following :

(a) Account for the apparent irregularities in, or justify, the underlined word in each of the following, referring to the grammatical rules :—10

- (i) न समयपरिरक्षणं क्षमं ते ।
- (ii) कक्षूरिकाश्वगविमर्द्दसुगन्धिवायुः ।
- (iii) स्पृष्टावती वस्तुषु केषु मागधी ?
- (iv) गोधूलिरेव कथितो भृगुजेन योगः ।
- (v) विमानना सुधु ! कुतः पितृर्गृहे ?

(b) How are the diminutives and multiplicatives formed in Sanskrit? Give THREE illustrations of each. 12

(c) Either, Distinguish the following three cases, referring to the grammatical rules to account for their difference :— 10

- (i) उपधायादधीते ।
- (ii) हिमवती गङ्गा प्रभवति ।
- (iii) पुत्रात् प्रमोदो जायते ।

And also account for the difference between :—

- (i) कियार्थोपपदस्य च कर्त्तव्यं स्थानिनः ।
- (ii) तुमर्थाच्च भाववचनात् ।

Or, Express in a SINGLE word any THREE of the following by adding appropriate affixes :—

- (i) निवर्त्त्यतेऽरिः क्रियया सः ।
- (ii) एनीव चाचरति ।
- (iii) चक्षाना व्रते ।
- (iv) उष्णं करोति ।
- (v) द्वाौ वषौ व्याप्यभूतः ( बालकः ) ।

(d) क्तप्रत्यय is ordinarily an affix of the passive past participle. Explain and illustrate its use in the active form and in the present tense ; and in this connexion comment grammatically on the underlined word in the following extract :— 12

समाहितैरप्यनिरुपितस्ततः

पदं दृश्यः स्याः कथमोशनादृशाम् ?

(e) When do the following roots take चाकनेपदी form ? Give ONE example of each :—

12

यम्, चर्, क्त and क्री ।

3. Answer the FIRST question and any TWO of the rest:—

36

(a) Show that the *Rāmāyaṇa* is earlier than the *Mahābhārata* and that the casting of its plot is Pre-Buddhist.

(b) Reproduce the enthusiastically sympathetic remarks made by Dr. Winternitz on the true poetic character of the episode of Sāvitrī and Satyavān found in the *Mahābhārata*.

(c) Enumerate the six *Vedāṅgas*, briefly noticing the contents of each, and write what you know of *Kāvya*prākāśa, *Kṛīrasvāmin*, *Śūhaṇa*, and *Guṇāḍya*.

(d) Either, Write a brief account of the *Sāṅkhya* philosophy.

Or, Give a brief account of Hindu mathematics.

(e) What are the views of modern scholars as to the method of interpreting the Vedas ?

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Explain fully either in English or in Sanskrit any ONE of the following extracts, with reference to the context:—

8

(i) क्शानुवर्षं ण्यधिदमुच्चैः सिंहासने संचयमेवभीमम् ।

निसर्गतोष्णं नयनस्थूलिङ्गं युगान्तवक्त्रे रिव धूमराग्रिमम् ॥

(ii) निमित्तयुग्मेः स्थगिता रजोभिर्दिशो मरुद्विर्विहृतैर्विचोलेः ।

स्वभावहोनेर्गुणचिचोपैः क्रन्दन्ति भर्त्तारमिवानिपन्नम् ॥

(b) Derive and give the derivative meanings of the two underlined words in either (i) or (ii), and conjugate their roots in लुङ् and लिट् respectively.

7

(c) Either, Describe, in simple Sanskrit of your own, the ominous phenomena referred to by Vibhīṣaṇa, in support of his advice to Rāvaṇa.

7

Or, Give the substance of Kumbhakarna's address to Rāvaṇa.

2. (a) Translate any ONE of the following extracts into English, bringing out the full meaning of it:—

8

(i) अगन्तमिहाहुतभावभास्त्रि जिताभिमानाश्च जना विचित्राः ।

कार्ये तु यत्र कुर्वत प्रकृष्टं मा नीतिगर्भान् सुधियोऽवमन्सम् ॥

(ii) उपेक्षणीयैव परस्य हस्तिः प्रगष्टनीतेरजितेन्द्रियस्य ।

मदादियुक्तस्य विरागहेतुः समूलघातं विनिहन्ति यान्ते ॥

(b) Comment grammatically on the underlined words in (i) and (ii). 3

3. (a) In how many cantos is the *Bhaffikāvya* complete ? 1  
 (b) Name, characterize, and show by an example, the metre of the twelfth canto, which is your text. 4

4. Discuss the merits and demerits of the language and style of *Kādambarī*. Has its author any rivals in this field of literary composition ? If so, name them and their respective works. 9

5. Give, in simple Sanskrit of your own, the parrot's description of either the *Sabara-sonā* and their hunting or the sunset time in the hermitage. 7

6. (a) Translate into English any ONE of the following extracts, adding explanatory notes where necessary :-- 10

(i) पुण्यभाजः खल्वमी मुनयः यदहर्निशमेनमपरमिव नलिनासनमपगताम्यापारा  
 मुखावलीकननिश्चलदृष्टयः पुण्याः कथाः शृण्वन्तः समुपासते । सरस्वत्यपि धन्या यास्य सततमति-  
 प्रसन्नं कण्ठाजलनिस्सन्दिग्धाधगाभौष्यै रुचिरहिजपरिवारा मुखकमलसंपर्कमनुभवन्ती निवसति  
 हंसीव मानसे । चतुर्मुखमुखकमलवार्सिभिश्चतुर्भिर्वेदैः सूचिरादिव द्वितीयमिदमपरमुचितमासादितं  
 स्थानम् । एनमासाय शरत्कालमिव कालिकालजलदसमयकलुषिताः प्रसादमुपगताः पुनरपि  
 जगति सरित इव सर्व्वविद्याः ।

(ii) गुरुपदेशश्च नाम पुद्गलाणामखिलमलप्रचालनचममजलं ज्ञानमनुपजातपलितादि-  
 वैकल्पमजरं हृदयलमनारोपितमेदादेशं गुरुकरणमसुवर्णविरचनमश्रायं कर्णाभरणमतीतज्योतिरालोकी  
 नोद्देगकरः प्रजागरः । विशेषेण तु राज्ञाम् । विरला हि तेषामुपदेष्टारः । प्रतिशब्दक इव  
 राजवचनमनुगच्छति जनी भयात् । उद्दामदर्पश्चयुस्त्यगितश्रवणविवराशोपदिश्यमानमपि ते न  
 शृण्वन्ति । शृण्वन्तीपि च गजनिमीलितेनावधौरयन्तः खेदयन्ति हितोपदेशदायिनीं गुरुन् ।  
 अहङ्कारदाहज्वरमूर्च्छान्तकारिता विव्वला हि राजप्रकृतिः ।

(b) Explain fully in Sanskrit the following TWO passages :— 11

(i) अभिषेकावसाने चानेकप्राणायामपूर्ता जपन्पवित्राण्यधमर्षणानि प्रत्यशमयैरुन्मुखी  
 रक्ताविन्दैर्नलिनीपत्रपुटेन भगवते सविधे दत्तार्चमुदतिष्ठत् ।

(ii) न स्त्रैर्विधमपरमपगितमिह जगति किञ्चिदलि यथेयमनार्था । लम्बापि खलु  
 दुःखेन परिपल्यते । दृढगुणपाशसंदाननिचन्दौऋतापि नश्यति । उद्दामदर्पभटसहस्रीकृत्तासिता-  
 सिलतापञ्जरविधृताप्यप्रक्रामति ।

7. Translate into Sanskrit any ONE of the following :-- 25

- (a) To aim at thy own happiness, is an end selfish and evil;  
 In earth, yea in heaven, if you seek it for itself, seeking you  
 shall not find.  
 Happiness is a roadside flower, growing on the highway of use-  
 fulness;  
 Plucked, it shall wither in thy hand; passed by, it is fragrance  
 to thy spirit;  
 Love not thy own soul, regard not thy own weal,  
 Be useful, and be happy.

(b) Education in the true sense of the word denotes something much more than the mere acquisition of knowledge. It denotes also the building up of character. Every man born into this world has in him some spark of the divine, some potentiality for good, the seeds, so to speak, which if properly tended will blossom into service in the cause of the general advancement of humanity.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Eight questions only are to be attempted, of which Question 1 is compulsory.*

1. Render any FOUR of the following into English, showing in brackets the original words after their equivalents in your translation :— 16

(a) तन्मित्रस्य वरुणस्याभिचक्षे ।

सूर्यो रूपं कृणुते दीरुपस्ये ।

अनन्तमन्वद्वयस्य पात्रः ।

कृष्णमन्वद्वरितः सं भरन्ति ॥

(b) ता वा वाक्पुत्र्युग्रसि गमयै

यव गावो भूरिश्रुता अयासः ।

अवाह तदुरुगायस्य वृणाः ।

परमं पदमव भाति भूरि ॥

(c) मित्राय पञ्च येमिरे जना अभिष्टिभवसे ।

स देवानि शान्तिभर्ता ॥

मि॒त्रो दे॒वेष्वा॒युष॒ जना॒य वृ॒त्तव॑र्द्धि॒षे ।

इ॒ष इ॒ष्टव॑ता अ॒कः ॥

(d) अ॒थ स्य॑मे॒व चि॒न्वती॑ म॒चा-

ग्यु॒षा या॑ति॒ स्व॒सर॑स्य॒ प॒त्री ।

स्व॒र्ज॑न॒न्ती सु॒भगा॑ सु॒दं॒सा

आ॒न्ता॒हि॒मः प॒प्रथ॑ आ॒ पृथि॑व्याः ॥

(e) अ॒रं दा॒सी न॒ मी॒ळ॒रुषे॑ का॒ग-

ए॒षं दे॒वाय॑ भू॒र्ष्ये॒ऽना॒गाः ।

अ॒चे॒तय॑द॒क्षिती॑ दे॒वी अ॒र्थी

गृ॒ह्म रा॒थे क॒वित॑री जु॒नाति॑ ॥

(f) मा॒ नो हिं॑सी॒ज्ज॒निता॑ यः पृथि॒व्या

यो वा दि॒वं स॒त्यध॑र्मा॒ ज॒जान॑ ।

य॒थाप॑च॒न्द्रा वृ॒क्षती॑र्ज॒जान॑

क॒ष्मे दे॒वाय॑ इ॒षि॒षा वि॒धेम॑ ॥

2. (a) Name the metres of the Rks in Question 1, specifying their characteristics. 12

(b) Re-write Rks (d) and (f) in the Pada form, showing the proper accents.

3. Mention the deities addressed in the Rks of Question 1, describing their nature and functions. 12

4. Write full explanatory notes on :— 12

(a) नितशु । (b) सुशेव । (c) एतम् ।

(d) चनीक । (e) द्रापि । (f) ऋष ।

(a) Paraphrase the following in classical Sanskrit according to Sāyana, and write brief notes in English where different interpretations have been proposed by European scholars :— 1

यो र॒प्रस्य चो॒दिता यः कृ॒षस्य

यो ब्र॒ह्म॒णी नाध॒मानस्य की॒रिः ।

यु॒क्तया॒न्धी योऽ॒विता सु॒भिप्रः

सु॒तसो॒मस्य स जना॒स इन्द्रः ॥

and

Either, (b) What was the occasion, according to Sāyana, when the hymn containing this Rk was uttered ?

Or, (c) Give the names of as many enemies of Indra as you can, and determine the importance of this deity in the Rgvedic period.

6. Translate the following into intelligible English :— 12

विष्णी॒र्नु कमि॒ति षडृ॒चं पञ्चद॒शं सू॒क्तं दै॒र्घतम॑सं दै॒ष्टुभं वै॒ष्णवम् । अ॒ना॒नु॒क्रान्ति॒का ।  
विष्णीः षडृ॒चं ह्री॒ति । अ॒भि॒प्र॒व॒ष॒ड॒ष्टृ॒षू॒क्येषु॑ त॒तीय॑सवने सोम॒ह॒वा॒क्का॒वाक॑स्य सोमा॒ति॒शंस॑-  
ना॒र्थमि॒दमा॒दि॒सू॒क्तद्र॒ष्ट॒ं वि॒नियु॑क्तम् । सो॒मे वर्ध॑मान इति ख॒ण्डे सू॒चितम् । विष्णी॒र्नु कमि॒ति  
सू॒क्ते परी॑ मा॒त्रये॒ष्णवा॑क इति । तथा त॒तीय॑सवने सोमा॒ति॒रेक॑ उ॒त्तरी॑त्तर॒संख्यी॑प॒गन्त॑व्या  
आ॒ति॒रा॒वात् । ततोऽ॒प्यति॑रि॒क्ते तद॑र्थमे॒व श॒स्त्रमु॑प॒गन्त॑यितव्यम् । तवै॒तदे॒व सू॒क्तं सोमा॒ति॒रेक॑  
इति ख॒ण्डे सू॒चितम् । म॒हो इन्द्रो॑ नृ॒षवि॑ष्णी॒र्नु कमि॒ति । अ॒ग्नि॒मा॒रुत॑श्च॒रे आ॒द्या वि॒नियु॑क्ता ।  
अ॒थ यथे॒तमि॒ति ख॒ण्डे सू॒चितम् । विष्णी॒र्नु कं वी॒र्या॑षि प्र॒वीचं॑ तनु॒ं तन्व॑न्नु॒जसो॑ मा॒नु॒षन्वि॑हीति ।

7. Annotate all the important words and names occurring in Question 6, tracing as far as practicable the quotations contained in it. 12

8. Comment on all the peculiar forms of Vedic grammar occurring in any FOUR of the Rks cited in Question 1. 12

9. (a) Show in what way the language of the *Rgveda* differs from classical Sanskrit. 12



- (b) Show the position of *upasarga* in the Vedic language. . . . .
- (c) Write a note on the use and formation of the Vedic subjunctive.
10. 'What renders these ( Rgvedic ) hymns so valuable for us is that we see before us in them a mythology in the making' ( WINTERNITZ ). Explain. 12
11. 'While these philosophical hymns form, as it were, a bridge to the philosophical speculations of the *Upaniṣads*, there exist also a number of poems in the *Rgveda-Samhitā*—there might be about twenty of them—which form a connecting link with the epic and dramatic poetry' ( WINTERNITZ ). Elucidate. 12

### SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

#### GROUP A ( Grammar )

*Attempt any FOUR questions from GROUP A.*

1. (a) Explain any THREE of the following *sūtras* with examples :— 15
- (i) अकथितं च । (ii) तुमर्थाच्च भाववचनात् ।
- (iii) भ्रुवमपायेऽपादानम् । (iv) विभाषा गुणेऽस्त्रियाम् ।
- (v) कर्तृकर्मणोः कृति ।
- (b) 'As the suffix *tumun* itself indicates *bhāva* ( अव्ययकृती भावे ), the portion भाववचनात् in the rule तुमर्थाच्च भाववचनात् seems to be redundant.' How would you proceed to meet this argument ?
- (c) What exactly is meant by भ्रुव in the aphorism भ्रुवमपायेऽपादानम् ? Does it simply mean 'motionless' or something that is fixed ? If so, how is the running horse treated as भ्रुव in relation to the man who has fallen down from it ( धावतीऽश्वात् पतितः ) ?
2. (a) Explain any TWO of the following *sūtras* with examples : 15
- (i) शेषाविभाषा । (ii) मयूरव्यंसकादयश्च ।
- (iii) तल्लुब्धः समानाधिकरणः कर्मधारयः ।
- (iv) गोस्त्रियोरपसर्जनस्य ।
- (b) Give the grammatical meanings of विभाषा and निपात, and enumerate the terms that are generally found as synonyms of विभाषा
- (c) Comment on समानाधिकरणस्य and show its application in Grammar.
- (d) What grammatical purpose is served by splitting up ( योगविभाषा ) the rule विभाषा गुणेऽस्त्रियाम् ?

3. Elucidate the following with reference to the respective contexts :— 15

(a) अत्र निपातेनाभिहितेऽव्यधिकरणे वचनसामर्थ्यात् समसौ ।

(b) असत्त्ववचनस्येत्यनुवृत्तेर्नैह—दूरः पन्थाः ।

(c) व्यधिकरणानामपि न—पञ्चभिर्मन्त्रमस्य ।

4. (a) Define वृत्ति and mention the different forms of it. Is *Vikāṣa* a kind of *samāsa*? Does it really conform to the fundamental principles of *samāsa*? If not, to what category does it belong? 15

(b) Name and expound the following compounds :—

(i) आश्रावैष्यम् ।

(ii) उपदशाः ।

(iii) इक्षुक्कायम् ।

(iv) अष्टागवम् ।

(v) मसन्नि ।

5. (a) Bring out the grammatical sense of उपसर्जनम्. Do you support the view expressed in अग्रधानमुपसर्जनम्? Do you know any form of उपसर्जनम् other than what is defined in प्रथमानिर्दिष्टं समास उपसर्जनम्? Is there any exception to the rule उपसर्जनम् पूर्वम्? Give reasons for your answer. 15

(b) Explain any ONE of the following :—

(i) उपपदविभक्तेः कारकविभक्तिर्बलीयसी ।

(ii) लक्षणप्रतिपदीकयोः प्रतिपदीकस्यैव यङ्यम् ।

#### Group B ( *Alaṅkāra* )

Attempt any FOUR questions from Group B.

6. Enumerate the qualities that go to contribute to the popularity and everlasting fame of a *Kāvya*. 10

7. Explain :— 10

नैसर्गिकौ च प्रतिभा कृतं च बहु निर्मलम् ।

अमन्दश्रमिणीः कारुण्यं काव्यसम्पदः ॥

8. Define and illustrate the following :— 10

(a) गर्भाह ।

(b) प्रहसन ।

(c) वीथी ।

(d) खण्डकाव्य ।

9. Either, Elucidate :—तदरूपतोपात्तु रूपकम् । 10

Or, Explain the different types of *Kāvya*.

10. Define and illustrate the following figures of speech :— 10

(a) उत्प्रेक्षा ।

(b) विरोधः ।

(c) व्याजस्तुतिः ।

11. Explain :—उपमैव तिरोभूतमेदा रूपकमुच्यते so as to bring out the difference between उपमा and रूपक. 10

## SANSKRIT—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Give in English or Sanskrit the main points in the message form Indra to Kṛṣṇa as delivered by Nārada. 10

*Or*, Explain fully in English or Sanskrit the main points in the speech of Balarāma in the council chamber.

2. *Either*, Explain fully in English or Sanskrit Manu's conception of *Dharma* and its source or sources. 10

*Or*, Explain fully the duties of a *naigṛhika* ( नैष्ठिक ) *Brahmachārin*, and the merit that accrues from such *Brahmachārya*.

3. First, indicate the contexts in, then render freely into English, and finally add short explanatory notes on (a) and (b). 8+8=16

(a)

*Either,*

गवानधीऽधी इहृतः पयोधरात्

समूढकपूरपरागपाङ्कुरम् ।

अथ' अचीन्धिगजेन्द्रकभिना

कुटीपसं भूतिसितेन शम्भुना ॥

*Or,*

पतत्पतङ्गप्रतिमक्षपोनिधिः

पुरोऽस्य यावन्न भुवि व्यलीयत ।

गिरिस्तडित्वागिव तावदुच्चकै-

र्जवेन पीठादुदतिष्ठदच्युतः ॥

(b)

*Either,*

तेषु सम्यग्वर्त्तमानो गच्छत्यमरलीकताम् ।

यथा संकल्पितांश्चेह सर्वान् कामान् समनुते ॥

*Or,*

अपां समीपे नियतं नैत्यकं विधिमास्थितः ।

सावित्रीमयधीयीत गत्वारण्यं समाहितः ॥

4. Give a free translation into English of any two of the following verses, indicating in each case the context :-- 8

(a) इत्यथं सम्प्रति हेतुर्देव्यतः

शुभस्य पूर्वार्चरितैः कृतं शुभैः ।

शरीरभाजां भवदीयदर्शनम्

व्यनक्ति कालवितथेऽपि योग्यताम् ।

(b) सङ्क्षिप्तस्याप्यतोऽस्यैव वाक्यस्यार्थगरीयसः ।

सुखितरतरा वार्धो भाव्यभूता भवन्तु मे ॥

(c) भवत्पूर्व्यं चरेद् भेषमुपनीतो विजोत्तमः ।

भवन्मध्यं तु राजन्वो वैश्यस्तु भवदुत्तरम् ॥

5. *Either,* Explain and illustrate the full forms of the names of the members of the four castes. 8

*Or,* Fix the proper time for the investiture of the sacred thread in the case of each of the three higher castes.

6. (a) Account for the case-endings in पशोधरान्, चणम् and शक्रुना in Question 3 (a). 9

(b) Expound the *samāsa*s in चणोत्क्षिप्तगजे द्रुमतिना and पतत्पतङ्गप्रतिमः in Question 3 (a). 4

(c) Derive any THREE of the following :—समृद्ध, पतङ्ग, तडित्वान्, नैयकम्, समाहितः ! 3

(d) *Neither*, Derive विशार and explain why it cannot be विशार in the case of सुविस्तरतरा वाचः । 3

*Or*, Account for the comparative degree in गरीयसः in Question 4 (b).

7. *Either*, Bring out fully in Sanskrit the meaning of तेषु सम्यक्वर्तमानः &c. in Question 3 (b). 6

*Or*, Explain in Sanskrit the full implication of हरत्यघम् &c. in Question 4 (a).

8. Translate into Sanskrit any FIVE of the following :— 25

(a) What a terrible night! The darkness was impenetrably thick all round.

(b) But the traveller must reach his destination; he must advance along the way.

(c) Presently a furious storm was raging there, terribly shaking the bigger trees, and uprooting the smaller ones.

(d) The whole passage was blocked now; any farther advance was impossible.

(e) The traveller was in a sad plight; he could neither advance nor retrace his steps.

(f) Absolutely helpless, he sat still on the ground and prayed to God.

(g) God listened to his prayers; the whole scene was changed in the twinkling of an eye.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any FOUR of the following verses : 20

(a) यदालीके सूक्ष्मं व्रजति सङ्घसा तद्विपुलता-

यदन्तर्बिच्छिन्नं भवति क्लृप्तसन्धानमिव तत् ।

प्रकृत्या यद् वक्रं तदपि समरेखं नयनयो-

नं मे पान्थे किञ्चित् चणमपि न दूरे रथजवात् ॥

(b) अनवरतधनुर्न्यासालनक्रूरपूवं-

रविकिरणसङ्घिष्ठं खेदलीशैरभिन्नम् ।

अपचितमपि गान्धर्वं व्यायतत्वादलक्ष्यं

गिरिचर इव गान्धर्वः प्राणसारं विभक्तिं ॥

- (c) रव्यान्तरः कमलिनीहरितैः सरीभि-  
 म्छायाद्भूमैर्नियमितार्कमयूखतापः ।  
 भूयात् कुशेश्वरजी सदुरेणुरस्याः  
 शान्तानुकूलपवनश्च शिवश्च पूज्याः ॥
- (d) अन्धात् परं वत यथाश्रुति सम्भृतानि  
 की नः कुले निवपनानि नियच्छतीति ।  
 सः सः सतिविकलेन सया प्रसिक्तः  
 धीताश्रुशेषमुदकं पितरः पिबन्ति ॥
- (e) इयं गेहे लक्ष्मीरियमश्वतवर्त्तिर्नयनयो-  
 रसावस्थाः स्पर्शो वपुषि बहुलसन्दनरसः ।  
 अथ कण्ठे बाहुः शिशिरमसृणः मौक्तिकसरः  
 किमस्या न प्रेयो यदि परमसद्मास्तु विरहः
- (f) त्वं वज्रिर्मनयो वशिष्ठगृहिणी गङ्गा च यस्या विदु-  
 र्माहात्म्यं यदि वा रघोः कुलगुरुर्देवः स्वयं भास्करः ।  
 विद्यां वागिव यामसुत भवती तद्वत्तु या देवते  
 तस्यास्त्वं दुहितृस्तथा विशसनं किं दारुणंऽसुख्यथाः ॥
- (g) वयमपि न खल्वेवं प्रायाः क्रतुप्रतिघातिनः  
 क इह च गुह्यैस्तं राजानं न वा बहुमन्यते ।  
 तदपि खलु मे स व्याहारस्तुरङ्गमरचिणां-  
 विज्जतिमखिलचवाचेप्रचण्डतयाऽकरोत् ॥
- (h) घोरं लोके विततमयशो या च वज्रौ विशुद्धि-  
 र्लङ्काद्वीपे कथमिव जनस्तामिह शृङ्घातु ।  
 इत्थाकूणां कुलधर्ममिदं यत् समाराधनीयः  
 कुरुष्वी लोकसदतिगहनं किं स वक्ताः करोतु ॥

2. (a) Parse प्रकृत्या in (a) and यथाश्रुति in (d). 2
- (b) Derive वशिष्ठ and प्रेयः 2
- (c) What is the root of वितत ? Give its third person singular 2  
 form.
- (d) Comment on the samāsa in कुशेश्वर. 2
- (e) Give the nominative plural form of रविकिरणसङ्घिष्णु as used in (b). 1
- (f) Change the voice of the first half either of (g) or of (h). 2

3. (a) *Either*, give the substance of the messages of Vasiṣṭha delivered by Aṣṭāvakra to Rāma and Sītā. 8

Or, Narrate the causes of the obstacle of study occurring to Ātreya

(b) Who was Mātali? With what mission did he come to Duṣyanta? How does he describe the purpose of his tussle with the Vidūṣaka? 6

(c) Quote or give in Sanskrit the substance of the *śloka*, describing either the merits of सृगया or the natural artfulness of women. 5

4. Write explanatory notes on any THREE of the following :— 6

वर्णाग्रहणे ; दादशस्थितस्य तेजसः ; पदवाक्यप्रमाणतत्त्वः ; पटपाकप्रतीकाशः  
and ब्रह्मपारायणम् ।

5. Explain, with reference to the context, any THREE of the following :— 12

(a) द्रिया दुरापः कथमौसिती भवेत् ।

(b) तमस्तपति चर्मांशौ कथमाविर्भवत्यति ।

(c) यद्वा वित्तं विधिधेति वित्तयं तत् समागतम् ।

(d) रहस्यं साधूनामनुपधि विद्युच्चं विजयते ।

(e) किमित्येवं पृच्छस्वनधिगत रामायण इव ।

(f) भिद्येत वा सृष्टन्तमोदशस्य निष्कांशस्य ।

Account for the absence of वृद्धी in प्रिया in (a). 1

6. Render into Sanskrit any TWO of the following Prākṛit passages :— 6

(a) जाणामि, अज्जज्ज, किन्दु सन्दावणारणो वन्धुअणविषयीणा होन्ति ।

(b) हृद्धो हृद्धा ताहं एव चिरपरिचिदाहं अकखराहं पञ्चवटीदसणेण पुणो वि मं  
मन्दभाइणि अनुकम्बन्ति ।

(c) तेण लह पत्तिअदु णं भवां मा कख वि तवस्सिणो हत्थे पडिहिर ।

(d) अहं जेण इडिपसुमारं मारिणी सो इमिणा साअएण अहिणन्दोअह ।

(e) सूअअ सुचीअअ एसो जालीवजीवी । उअवणी किल से अज्जुलीअअअ आअणी ।

7. Translate into Sanskrit :— 25

(a) I am old and feeble. It is true, therefore, my body cannot go. But in my thought I always go there; for my heart, O Brahmana, is joined to him.

(b) But if thy mind no longer finds delight  
In sights and sounds and things that please the taste,  
What is it, in the world of men or gods,  
That thy heart longs for? Tell me Kāśyapa.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any **TWO** of the following passages :— 30

(a) मुनयः स्वाः क्रियाः समाप्य युष्मद्वी यथास्थानमुपाविशन् । अहमध्यात्मवृत्तान्त-  
श्रवणोत्सुक्यापलं विहाय स्थिरमना आसन् । अथ भगवान्नावालिः स्वविष्टरे सुखासीनो बभूव  
प्रचक्रमे । तपोधना, इमां कथां दत्तावधानाः श्रुत्वा । अवन्तिषु गुणसम्पदां निधिर्बिभूतिनिर्जि-  
तलङ्कालकामरावती नगयुञ्जयिनी नाम । यस्यां कौलासनिवासप्रौतिमुज्ज्वाता भगवता महाकालिन  
स्थितिः क्रियते । तस्यां भरतभगोरथीपमत्तारापीड इति पृथिवीपतिर्बभूव । तस्यामात्यः  
प्रज्ञाविभवविहसितदेवगुरुः युक्तासी नाम ब्राह्मण आसीत् ।

(b) विधूतकेसरसटाग्र साटोपगृहीतहरितदूर्वापल्लवकवलप्रशस्तीमुखपटेः समङ्गे वन्य दृष्टा  
वाजिनः । सलीलमुत्थितैर्हस्तपल्लवैर्वृत्त्यन्त इव श्रवणसुभगं जगजुर्गजाः । ववौ चाचिराश्चक्रायुध-  
मुत्सृज्य लक्ष्म्या निश्वास इव सुगमोदसुगमिर्दिव्यानिः । यज्वनां मन्दिरेषु प्रदक्षिणां शिखाकलाप-  
कथितकल्याणागमा प्रजज्वलुरनिम्बना वैतानवक्रयः ।

(c) शक्रावताराभ्यन्तरे वासी कश्चिद्वीररो जालोद्गालादिभिर्मत्स्यबन्धनोपायैः कूटुम्भरचन-  
करोत् । एकस्मिन्दिवसे तेन रोहितमत्स्यः खण्ड्यः कल्पितः । तदा तस्योदराभ्यन्तरे रत्नभासुर-  
मङ्गुलीयकं तेन दृष्टम् । पश्चाद्विक्रयाय दर्शयन्नागरिकेण राजश्यालिन गृहीतः । तस्य मङ्गुलीयकस्य  
विस्मयमन्नाप्राय मत्स्योदरसंस्थितमेव तदिति निश्चित्य वीररं प्रतिपालयितुं रचिणावादिष्य राजश्याली  
राजकुलं जगाम । तत्र राज्ञे यथागमनमङ्गुलीयकं निवेद्य राजश्रमणादाय प्रतिनिष्ठतः ।

2. (a) Join according to *sandhi* rules any **TWO** of the following :— 3

अप्राविष्णु इज्येते इष्टौ अस्याम् ।

कः अन्व. पुनः ईश्वरात् शक्तः एतद् कर्तुम् ।

अमुष्मिन् लोके आचार्यान् शिष्याः अभिवादयन्ते ।

(b) Decline :—लक्ष्मी in nominative singular ; प्रथम (masculine) in  
nominative plural ; दोस (masculine, an arm) in locative singular ; पाद  
(masculine, a foot) in instrumental dual ; तिर्यञ्च (masculine) in locative  
plural ; and पश्विन् in genitive plural. 6

(c) Conjugate any **THREE** of the following :—क्री in लट् ; इ in लङ् ;  
गुप् in लोट् ; विद् (2 Parasmaipada, to know) in लिट् ; गुह् (Parasmaipada) in  
लुङ् ; and क्षु in विधिलिङ्. 6

(d) Derive the following :—सीद्धा ; गोढव्य ; धौत ; दायिधमाश ;  
and वृषोधिषणीय । 5



(e) Expound the following : - कवयति ; कवीयति ; अग्रनायति ; अग्रनीयति ; असरायते ; सुखायते । 6

(f) Name and dissolve the *samūhas* in any FIVE of the following :  
पितरौ ; देवानांप्रियः ; कापुरुषः ; कृष्णसखः ; कमलाक्षी ; उपविष्णु ; चित्रगुः ;  
and दण्डादण्डि । 10

3. Correct the following :— 4

(a) सा तपस्विनी मत्तपापात् जातम् ।

(b) मा चीरानभेष्ट ।

(c) भक्तिं देवो रचन्ते ।

(d) रामाय ह्यो पुनो आत्मा ।

4. Write a note on any ONE of the following :— Either, 'Social life as depicted in the *Atharva Veda*', or, 'The age of the *Veda*.' 10

5. Write a note on any ONE of the following :— Either, 'Ancient heroic poetry in the *Mahābhārata*', or, 'The genuine and the spurious in the *Rāmāyaṇa*', or, 'The *Purāṇas* and their position in Indian literature'. 10

6. What do you know of any FIVE of the following :— *Kāvyaḍḍarśa*, *Jñanābhāṣya*, *Navasūhasāṅkacharita*, *Bṛhatkathāsaritsūgarā*, *Chaurapañchāṅkikā*, *Sūryasatāka*, *Vāsavadattā*, *Paranadīpta*. 10

## PĀLI

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## FIRST PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. What is the precise meaning of the title of the *Dhammapada*? What is meant when it is claimed : *dhammapadam sudesitam kusalo pupphamiva paccassati*? To which class of literature does the *Dhammapada* belong? 10

2. *Either*, Give a short account of the different recensions of the *Dhammapada*, and ascertain the relative chronological position of Pāli version. 10

*Or*, Indicate how the reflections in each *vagga* of the *Dhammapada* are sought to be intensified in some select verse or verses, illustrating your answer with suitable examples from your text. 10

3. *Either*, Comment on the common burden of all the stanzas in each of the two poems *Uruga-Sutta* and *Khaggavisāṇa-Sutta*. 10

*Or*, What light is thrown on the social and religious background by the *Saḥassavagga* and the *Bāḥmaṇavagga* of the *Dhammapada*? 10

4. Explain ONE of the following two stanzas in Pāli :— 10

- (a) Yathā saṅkāradhānasmiṃ ujñitasmiṃ mahāpathe |  
padumaṃ tattha jñeytha suviggandham manoramaṃ |  
Evaṃ saṅkārabhūtesu andhabhūte puthujāno |  
atirocati paṇḍitāya sammāsambuddhasāvaḥko ||
- (b) Sikhī yathā nilagivo vihaṅgamo haṃsassa nopeti javāṃ kudācanaṃ |  
evaṃ gihī nānukaroti bhikkhuno munino vivittassa vanamhi  
jñāyato ||

5. Write short explanatory and critical notes on any FOUR of the following :— 10

- (a) *Manopubbaṅgamū dhammū*.  
(b) *Dūraṅgamaṃ ekacaraṃ asariraṃ guhāsayaṃ (cittaṃ)*.  
(c) *Anekaññisāṇisūraṃ sandhāvissam anibbisaṃ*.  
(d) *Duppabbajjaṃ durabhīramaṃ durāvāsā gharū dukkhā*.  
(e) *Santimaggaṃ eva brūhaya nibbānaṃ sugatena desitaṃ*.  
(f) *Appamādo amatapadaṃ*.

6. Translate any TWO of the following stanzas into English, adding explanatory notes where necessary :— 10

- (a) I'henūpamaṃ kāyaṃ imaṃ viitvā marīcidhammaṃ abhisambudhāno |  
chetvāna Mārassa papupphakāni adassanaṃ Maccurājassa gacche ||
- (b) Na naggacariyā, na jaṭṭā, na paṅkā, nānāsakā, thaṇḍilasāyikā vā |  
rajo vajall' ukkuṭṭikappaṇḍhānaṃ sodhenti maccaṃ avitippakaṅkham ||
- (c) Asamā ubho dūravihāravuttino gihī dūraposī, amamo ca subbato |  
parapāparodhāya gihī asāṇiṇato niccaṃ muni rakhati pāṇino yato ||

7. Comment on the language and poetry of the *Dhammapada* and the *Suttantapāṭa*. 10

8. Translate into English :— 30

Abhiññeyyaṃ abhiññātāṃ bhāvetabbaṃ ca bhāvitāṃ |  
pahātabbaṃ pahīnaṃ me, tasmā Buddho'smi brāhmaṇa ||  
Vinayassu mayi kaṅkham, adhimuccassu brāhmaṇa |  
dullabhaṃ dassetanaṃ hoti sambuddhānaṃ abhiñhaso ||  
yesaṃ vo dullabho loka pātubbhāvo abhiñhaso |  
so 'haṃ brāhmaṇa sambuddho sallakatto anuttaro ||  
Brahmabhūto atitulo Mārasenappamaddano |  
sabbāmitte vasikatvā modāmi akuto bhayo ||  
"Imaṃ bhonto nisāmetha, yathā bhāseti cakkhumā |  
sallakatto mahāvīro, sīho va nadati vane" ||

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any TWO of the following extracts, commenting fully upon the words italicized:— 22

(a) Atha kho āyasmā Assagutto tassū rattiyaṃ accayona pubbanhasamayāṃ nivāsetvā pattācivaram ādāya āyasmatā Nāgasenena saddhiṃ *pacchāsamañjena* yena mahā-upāsikāya nivesanaṃ ten' upasaṅkami; upasaṅkamitvā paññatte āsane nisīdi. Atha kho sū mahā-upāsikā āyasmantaṃ Assaguttaṃ āyasmantaṃ ca Nāgasenaṃ pañitena khādaniyena bhojaniyena sahatthā santappesi sampavāresi. Atha kho āyasmā Assagutto bhuttāvi onītapattappāpi āvasūntaṃ Nāgasenaṃ etad avoca: Tvāṃ Nāgasena mahā-upāsikāya anumodanaṃ karohi ti.

(b) Tena kho pana samayena āyasmā Āyupālo Saṅkheyyapariveṇe paṭivasati. Atha kho Milindo rājā amacce etad avoca: Ramanīyā vata bho dosinā ratti, khan nu khv aṇṇa *samayaṃ* vā brāhmaṇam vā upasaṅkameyyīma sākacchāya pañhapucchanaṃ, ko mayā saddhiṃ sallapitum ussaṇṇaṃ kaṇṇhaṃ paṭivinetum ti. Evaṃ vutte paṇca atā Yonakā rājānaṃ etad avocum: Atthi mahārāja Āyupālo nāma thero tepīṭako bahussuto āgatāyamo, so etarahi Saṅkheyya-pariveṇe paṭivasati, gaccha tvam mahārāja āyasmantaṃ Āyupālaṃ pañham pucchassu ti.—Tena hi bhaṇe bhaddantassa ārocethā ti.

(c) Tena kho pana samayena āyasmā Nāgaseno samaṇaganaṃ parivuto saṅghī gaṇi gaṇācariyo.....buddhānaṃ viññūnaṃ sotāvadhānaṃ samannāgatānaṃ sandassento *navaggaṃ* jinasāsanaratanāṃ, upadissanto dhammamaggaṃ, dhārento dhammapajotaṃ, ussāpento dhammayūpaṃ, yajanto dhammayāgaṃ, paggaṇhūpento dhammadhajaṃ, ussāpento dhammaketum, uppalāsento dhammasaṅkhaṃ, āhananto dhammabheriṃ, nadanto sihanādaṃ, gajjanto *mdagajjitaṃ*,.....gāmanigama-rājadhāniṃ cārikaṃ caramāno anupubbena *Sāgalanagaraṃ* anuppatto hoti.

What is the logical connection between the two expressions *ramanīyā dosinā ratti* and *pañhapucchanaṃ* in extract (b)? Derive *bhuttāvi* in extract (a) and *sākacchāya* in extract (b). Parse *pucchassu* and *bhaṇe* in extract (b). Conjugate in the aorist the root of *uppalāsento* in (c). Account for the case-ending in *bhaddantassa* in (b). 6

2. Explain in Pāli any TWO of the following stanzas:— 8

(a) Ayaṃ patitthā dharaṇi va paṇinaṃ,  
idaṃ ca mūlaṃ kusalābhivuddhiyā,  
mukhaṃ e' idaṃ sabba-jinānūsāsane  
yo silakkhandho varapūtimokkhiyo.

(b) Paṭigace' eva taṃ kayirū yaṃ jañña hitam attano;  
na sākaṭikacintāya mantā' dhiro parakkame.

(c) Allacammapaṭicchanno navadvāro mahāvāṇo  
samantato paggharati asuci pūtigandhiyo.

3. Attempt ONE of the following questions, showing how Nāgasena dealt with the same, and adding your own observations:— 6

(a) *Yam pan' etaṃ brūsi "nāmarūpan" ti, tattha katamaṃ nāmaṃ kalamasā rūpaṃ?*

(b) *Yam pan' etaṃ brūsi "purimā koṭi na paññāyati" ti, kalamā ca sū purimā koṭi?*

4. Either, Explain fully any TWO of the following:— 9

(a) Kukkuṭiyā aṇḍaṃ, aṇḍato kukkuṭi.

(b) Na sakkā imesaṃ dhammānaṃ vinibbhujitvā vinibbhujitvā nānākāraṇaṃ paññāpetum.

(c) Yo na labhati nibbānaṃ jānāti so : sukhaṃ nibbānaṃ" ti.

Or, Why does Rohaṇa, while thinking of a course of training for Nāgasena, merely ask himself : "Suttante vā Abhidhamme vā", and why does he not add "Vinaye vā" ? What does this suggest as to the condition of the Cannon at the time, with special reference to the Abhidhamma ?

5. Comment fully upon the idiom in the following expressions :—*aticchatha bhante, meṇḍake pañhe pucchissāmi, gāḥaṇi kacchaṇi bandhitvā, palāpo vata bho Jambudīpo, isivātaparivūtaṇi akāsisu.* 10

6. Either, What valuable information on old Indian social life can be obtained from the story of Udena and Vāsuladattā ? 9

Or, Summarize, giving parallels, any story selected from your text of the *Dhammapada-Aṭṭhakathā*.

7. Translate into idiomatic English :—

30

Paṭhamabodhiyaṃ hi vīsativassāni Bhagavato anibaddhaupaṭṭhākā ahesuṃ. Ath'ekadivasaṃ Bhagavā bhikkhū āmantesi : "Bhikkhave idāni 'mhi mahallako, nibaddhaupaṭṭhākāṃ me ekaṃ bhikkhuṃ jānāthā" ti. "Bhante ahaṃ upaṭṭhahissāmi, ahaṃ upaṭṭhahissāmi" ti sirasi añjaliṃ katvā utṭhite Sāriputtatherādayo "Tumhākaṃ patthanā matthakaṃ pattā, alaṇ" ti paṭikkhipi. Tato bhikkhū Anandattheraṃ "Tvaṃ āvuso upaṭṭhākaṭṭhānaṃ yūcā" ti jāhāsi. Thero "Sace me Bhagavā attanā laddhaṃ cīvaraṃ na dassati, piṇḍapātaṃ na dassati, ekagandhakuṭiyāṃ vasitūṃ nā dassati, maṃ gahe tvā nimantanāṃ na gammissati, sace pana Bhagavā mayā gaḥitaṃ nimantanāṃ gammissati, sac' āhaṃ tiroraṭṭhā tirojanapadā Bhagavantaṃ daṭṭhuṃ āgataparisaṃ āgatakkhaṇe yeva dassetuṃ labhissāmi, yadā me kaṃkhā uppajjati tasmiṃ khaṇe Bhagavantaṃ upasaṃkamitūṃ labhissāmi, sace yaṃ Bhagavā mama parammukkhā dhammaṃ katheti taṃ āgantvā mayhaṃ kathessati, ev' āhaṃ Bhagavantaṃ upaṭṭhahissāmi" ti ime cattāro paṭikkhepe catasso ca āyicāṇi ti aṭṭha vare yūci. Bhagavā pi 'ssa adāsi. So tato paṭṭhīya pañcavīsativassāni nibaddhaupaṭṭhāko ahoṣi.

### THIRD PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

#### GROUP A

1. (a) Comment on the *sandhi* (euphonic combination) in any THREE of the following :— 3

राजशिव ; इतो नायति ; चतुरो मे ; विद्यज्ञना ; and त्याह ।

(b) Give the conjugated forms (in Pāli) of *brū* or *is* in the present, *dā* or *as* in the imperative, and *pac* or *kar* in the aorist. 6

(c) Substitute single words for :— 3

मदनश्च धान ; सुवो विय दिशति ; and पुद्यजनश्च भावो ।

(d) Illustrate the use of EITHER passives OR desideratives and EITHER the seventh case-ending OR frequentatives. 3

2. (a) Correct any TWO of the following sentences :—

4

(i) मां वस्त्रं प्रदत्त्वा पिता गतः ।

(ii) \*राजसुतां दृष्ट्वा दृष्टी बभूव ।

(iii) तयो बालिकाः पुष्पाणि चयन्ति ।

(b) Give the feminine forms of any TWO of the following :

2

आचार्य, मत्स्य, and विद्स् ।

(c) Decline श्रीमत् and महिमन् in the locative, अद्यद् and युष्मद् in the dative, and वारि in the genitive.

3

(d) Illustrate the use of नामधातु and समाहारद्वन्द्व

3

(e) Translate into Sanskrit any TWO of the following :—

3

(i) Worship your parents.

(ii) Twenty saints are there.

(iii) No work, no peace.

#### GROUP B

*Attempt Question 2, and any TWO of the rest.*

1. Define a 'dialect'. How do dialects point to a common mother language? 13

2. What do you understand by 'Intellectual Laws of Language'? Illustrate your answer. 14

3. What insight into the gradual formation of syntax do you get from adverbs and prepositions? 13

4. Note the views of different scholars as to the basis of literary Pāli :—13

#### GROUP C

Translate into Pāli :—

30

(a) Putting away foolish talk, he abstains from vain conversation. In season he speaks; he speaks that which is; he speaks fact; he utters good doctrine; he utters good discipline: he speaks and at the right time, that which redounds to profit, is well-grounded, is well-defined, and is full of wisdom.

(b) Belief and joy, mind and thought, incline me towards the doctrine of Gotama. Whichever way the very wise man goes, that self-same way my heart, too, turns.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## A TEXT.

1. Translate into English any two of the following passages, clearing allusions, technicalities, or difficulties, if any, in the italicized words:—18

(a) Lokanūthe Dasabale sattāhapanibbute  
*dubbhāsitaṃ Subhaddassa vuḍḍhassa vacanaṃ saraṃ ||*  
*Saraṃ cīvaradānaṃ ca samatte tthapanam tathā* "  
 saddhammatthapanatthāya muninānuggahaṃ kataṃ ||  
 Kātuṃ saddhammasaṃgītiṃ sambuddhānumatiṃ satīti |  
 navaṅgaśāsanadhara sabbāṅgasamupāgate ||  
 Bhikkhū pañcasatān' eva mahākhināsava vare |  
 saṃmanni eken' ūne tu *Ānandatherakāraṇā* ||

(b) Taṃ sutvāna Yasatthero caraṃ *Vajjisu* cārikaṃ |  
*chaḍḍhūnūbalappatto Kūkaṇḍakadijatrajo |*  
 taṃ sametuṃ sa-ussāho tatthāgami Mahāvanaṃ ||  
 Thapetvā 'posathagge te kamsapātiṃ sahodakaṃ |  
 "kahāpaṇādi saṃghassa dethā" t' ūhu upāsake ||  
 "Na kappat' etaṃ, mā detha" iti thero sa vūrayi |  
*Paṭisāraṇiyaṃ kammaṃ* Yasattherassa te karuṃ ||  
 Yācitvā anudītaṃ so saha tena puruṃ gato |  
 attano dhammavāditaṃ saṃnāpetvā va nāgare.

(c) Khamāpetvā dhammike te bhikkhū sabbe *malāpāti* |  
 attano dhammapakkhattaṃ vatvā "tumaḥ yathāruci |  
 sampaggahaṃ sāsanaṃ karoṭhā" ti ca bhāsiya |  
 datvā ca tesu ārakkhaṃ agamāsi *sakaṃ puruṃ* ||  
 Nicchetuṃ tāni vatthūni saṃgho saṃnipatī tadā |  
*anaggaṇi* tattha *bhassāni* saṃghamaññhe ajāyisuṃ ||  
 Tato so Revataththero sūvetvā saṃghamaññhago |  
 ubbhākiya taṃ vatthuṃ sametuṃ nicchayaṃ akā ||

2. comment fully upon ONE of the following extracts:—

3

(a) Thereh' eva katattā ca theriyāyaṃ paraṃparā.

(b) Mūl' atthehi vinā vatthusamaṇaṃ neva rocaya.

3. Either, What do you understand by the term 'vatthu' in *vatthutthaya-parāyanā* and *vatthusamaṇaṃ*? Explain fully *dasavattūni*. 7

Or, Give the names, together with the periods of rule, of the kings of Magadha from Ajātasattu to Kālāsoka. 7

4. Comment upon the aptness of the discourses delivered by the Buddhist missionaries to the people of Kasmīragandhāra and Suvannabhūmi, giving your observations, if any, on the cultural position of the latter, as hinted at in the *Mahāvamsa*. 6

5. Either, (a) Name the theras of the Second Council who were contemporaries of the Buddha. 6

(b) Name the theras meant in the passage:—

"Visuṃ te pañca ratthāni pañca therā pasādayuṃ."

Or, Write notes on any SIX of the following:— 6

Samghatthera, catuppaccayaṃ, Vebhāra, therāsaṇaṃ, dhammāsaṇaṃ  
 Vedhamuni, Vesālī, Pupphapura, gandhakuṭi, pitughātakavamsa.

## B. SANSKRIT GRAMMAR

6. (a) Join according to *sandhi* rules :—

2

अधः + पदम् ; तद् + शूरः ; अप + मयम् ; तद् + हेयम् ।

(b) Decline दिव् (heaven) or गिर् (speech) in *Dvitiyā* and *Ṣaṣṭhī* ; जरा (old age) or स्वादु (sweet) in *Tṛtīyā* and *Caturthī*.

2

(c) Conjugate रुद (to weep) in लङ् ; शी (to lie down) or सू (to bring forth) in लट् ।

6

(d) Give the feminine forms of any FOUR of the following :

2

साधु, गोप, पण्डित, बलिन्, सम्बाज्, ददन् ।

(e) Give the superlative (without adding the suffix तम) of any TWO of the following, and frame short sentences to illustrate their use :—स्त्रिय, गुरु, प्रिय, बलवत्, पाप ।

4

(f) Write out the distinction in meaning between any THREE of the following pairs of words :

6

रञ्जयति and रजयति ; आददाति and आदत्ते ; विक्रामति and विक्रमते ; उपतिष्ठते and उपतिष्ठति ; भुनक्ति and भुङ्क्ते ।

7. Correct the errors in any FOUR of the following :

8

- (i) गुरुं शुश्रूषति शिष्याः ।
- (ii) आसनाद् उत्तिष्ठते ।
- (iii) विजयन्तु महाराजः ।
- (iv) लक्ष्मी श्रीं ददन्ति ।
- (v) प्राते भ्रमणं कुरुस्व ।
- (vi) गावाणि मे न स्पृश्यत ।

## C. UNSEEN

8. Translate into English :

30

Te ca tattha dhanam laddhā sannidhiṃ samarocavum ।  
 tesam icchāvattiṇṇaṃ bhiyyo taṇhā pavaḍḍatha ।  
 te tattha mante ganthetvā Okkākaṃ punamupāgamum ॥  
 "Yathā ūpo ca paṭhavi ca hiraṇṇiṃ dhanadhāniyaṃ ।  
 evaṃ gāvo manussānaṃ, parikkhāro hi pāṇiṇaṃ ।  
 yaḷassu, bahu te vittaṃ ; yaḷassu, bahu te dhanam" ॥  
 Tato ca rājā saṇṇatto brāhmaṇehi rathesabho ।  
 nekasatasahassiyo gāvo yaṇṇiṇe aghātayi ॥  
 Tato ca devā pitaro Indo asura-rakkhasā ।  
 "adhammo" iti pakkhandum, yaṃ, sattham nipati gawe ॥  
 Eso adhammo daṇḍānaṃ okkanto purāṇo ahu ।  
 adūsikāya haṇṇanti, dhammā dhamṣenti yājakā ॥

Ēvaṇi eso anudhammo porāṇo viññugarahito ।  
 yattha edisakaṃ passatī yājakaṃ garahatī jano ॥  
 Ēvaṃ dhamme viyāpaṇe vibhinnā suddavesikā ।  
 puthu vibhinnā khattiyā, paṭiṃ bhariyā avamaññatha ॥  
 Khattiyā brahmabandhū ca ye c' aññe gottarakkhitā ।  
 jātivādaṃ niraṃkatvā kāmānaṃ vasam āgamuṃ.

## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Put together from the *Mahāparinibbāna Sutta* the references to events, which you consider historical. 8

*Or*, Give an account of the Third Council and the missions dispatched by Moggaliputta Tissa for the propagation of Buddhism. 8

2. *Either*, To which part of India was the Buddha's tour confined? Support your answer by giving information from the *Mahāparinibbāna Sutta*. 8

*Or*, Name the kings and clans that were allowed to have shares in the corporeal relics of the Buddha. 8

3. (a) Name the four places of pilgrimage recommended to a Buddhist devotee in the *Mahāparinibbāna Sutta*. 4

(b) *Either*, What are the four ways of ascertaining the correctness of the Buddha's sayings. 4

*Or*, Discuss the probable date of composition of the *Mahāparinibbāna Sutta* with special reference to the internal evidences furnished by the *Sutta*. 4

4. Summarize in Pāli the answers given by the Buddha to ONE of the following questions of Sakka :— 8

(a) Kathaṃ paṭipanno bhikkhu pātimokkasaṃvarāya paṭipanno hotīti ?

(b) Kathaṃ paṭipanno bhikkhu indriyaṃvarāya paṭipanno hotīti ?

5. Explain ONE of the following passages :— 8

(a) Vande te pitaraṃ bhadde Timbaruṃ Suriya-vaccase,  
 Yena jātū'si kalyāṇi ānanda-janaṇī mama.  
 Vāto va sedakaṃ kanto pāṇīyaṃ va pipāsino  
 Aṅgīrasī piyā me 'si dhammo arahatāṃ iva,  
 Āturass' eva bhesajjaṃ bhojanaṃ va jighacchato,  
 Parinibbāpaya bhadde jalantam iva vārinā

(b) Iṃe kho bhikkhave dhammā mayā abhiññāya desitā : cattāro satipaṭṭhānā, cattāro sammappadhānā, cattāro idhipādā, pañce indriyāni ; pañca balāni, satta bojjhaṅgā, ariyo aṭṭhaṅgiko maggo.

6. (a) *Either*, Write down the feminine forms of *aśva* and *niṣāda*, or distinguish between *ūcūryū* and *ūcūryūyī*. 2

(b) Give the comparative forms of any TWO of the following :—*sthira*, *antika*, *vrddha* 2

(c) Fully decline *either etad* or *adas* in the masculine. 4

7. (a) *Either*, Explain the difference between *upamitakarmadhāraṇa* and *upamāna-karmadhāraṇa*, or, account for the singular forms in *pāṇipādam* and *ahinakulam* 4



- (b) Conjugate EITHER *kr* OR *rudh* in the third person aorist. 2  
 (c) Change the voice in any TWO of the following sentences :— 4

- (i) मृत्युः भ्रातृं वहति ।  
 (ii) शिशुः लक्ष्मिः रोदति ।  
 (iii) नारीभिः धर्मः अनुदीयते ।  
 (iv) विद्वांसं विद्यार्थिनः अध्यापयन्ति ।

8. Translate into Sanskrit any THREE of the following :— 12

- (a) Somebody has stolen my umbrella which I bought recently.  
 (b) He valued justice more than his brother though to him the latter was dearer than life  
 (c) The horse is very gentle and can trot a long way without being tired.  
 (d) Invite him to spend some time with you in the village when he has recovered.  
 (e) The man was caught in order that he might not run away.

9. Translate into English any TWO of the following extracts :— 30

(a) Atha kho bhagavato etad ahoṣi : kassa nu kho ahaṃ paṭhamam dhammam daseyyam, ko imam dhammam khippam eva ājānissatīti. Atha kho bhagavato etad ahoṣi : ayam kho Ālāro Kālāmo paṇḍito vyatto medhāvī digharattam apparajakkhajātiko, yam, nūnāham Ālārassa Kālāmassa paṭhamam dhammam daseyyam, so imam dhammam khippam eva ājānissatīti. Atha kho antarāhitā devatā bhagavato ārocesi : sattāhakālamkato bhante Ālāro Kālāmo 'ti. Bhagavato pi kho nūnam udapādi sattāhakālamkato Ālāro Kālāmo 'ti.

(b) Atha kho bhagavā bhikkhū āmantesi : mutt' āham bhikkhave sabba-pāsehi ye dibbā ye ca mānusa. Tumhe pi bhikkhave muttā sabbapāsehi ye dibbā ye ca mānusa : caratha bhikkhave cārikam bahujaṇahitāya bahujaṇasukkhāya lokānukampāya atthāya hitāya sukhāya devamanussānam, mā ekena dve agamittha. Desetha bhikkhave dhammam ādikalyāṇam majjhikalyāṇam pariyoṣānakalyāṇam sāttham savyañjanam kevalaparipuṇṇam parisuddham brahmacariyam pakāsetha.

(c) Atha kho Cundo samanuddeso Pāvāyam vassavuttho yena Sāmagāmo yen' āyasmā Ānando ten' upasamkami, upasamkamitvā āyasmantaṃ Ānandaṃ abhivādetvā ekamantaṃ nisīdi. Ekamantaṃ nisinno kho Cundo Samanuddeso āyasmantaṃ Ānandaṃ etad avoca : Nigaṇṭho, bhante, Nātaputto Pāvāyam adhunā kālakato. Tassa kālakiriyāya bhinnā Nigaṇṭhā dvedhikajātā bhaṇḍana-jātā kalahajātā vivādāpannā aññamaññaṃ 'mukhasattibi vitudantā viharanti.

## SIXTH PAPER

*Candidates are required to give answers in their own words as far as practicable.*

*The questions are of equal value.*

### GROUP A

*Attempt FOUR questions only.*

1. Describe the political condition of India about the time of Buddha.
2. What do you know of the Śākya, their mode of life and political institutions? What was the cause of their downfall?

3. Give an account of the trade routes of India described in Pāli literature.
4. Set forth the history of the Mendicant Orders in Ancient India.
5. Estimate the importance of Aśoka in the history of Buddhism.
6. Describe the rules of admission into the Buddhist Saṅgha.
7. Give the traditional account of the first two Buddhist Councils, and discuss how far they are historical.

## GROUP B

*Attempt FOUR questions only.*

8. Explain and illustrate the distinction between polysynthetic and monosynthetic languages.

9. 'As Paul says, language knows nothing of precautions.....against the future results of changes.' Explain.

10. 'It is clear from a survey of the inflections of late Aryan as revealed to us by comparative philology, that they are but the ruins of an older system, in which the inflections were much more numerous, but at the same time more distinct and regular.' Discuss.

11. 'Old Sanskrit and Avesta are sister languages which separated from each other in at least the second millenium before Christ.' Elucidate.

12. Point out clearly the interrelation of Pāli and the Sanskrit languages (Vedic and Classical).

13. What are the Literary Prākṛits? Describe their genesis and phonology.

## PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any FOUR of the following stanzas into English, adding explanatory notes where necessary :— 20

- (a) Appam pi ce sahitaṃ bhāsamaṇo dhammassa hoti anudhammacārī |  
rāgañ ca dosaṇ ca pahāya mohañ sammappajāno suvimuttacitto |  
anupādiyaṇo idha ca huraṇ ca sa bhāgavā sāmāññassa hoti ||
- (b) Kumbhūpamaṃ kāyaṃ imaṃ viditvā nagarūpamaṃ cittaṃ idaṃ  
tāpetvā |  
yojetha māraṃ paññāyudhena jitaṃ ca rakkhe anivesano siyā ||
- (c) Vāpiyo va bhayaṃ maggaṃ appasatthaṃ mahaddhanaṃ |  
visaṃ jivitukāmo va pāpāni parivajjaye ||

- (d) Porāṇam etaṃ, Atula ! n' etaṃ ajatanāṃ iva |  
nindanti tuṭṭhim āsinaṃ, nindanti bahubbhāpināṃ |  
mitabbhāpināṃ pi nindanti, n' atthi loke anindito ||
- (e) Kuso yathā duggahito hatthaṃ evānukantati |  
sāmaṇivāṇā dupparāmaṭṭhaṃ nirayā' upakaddhati ||
- (f) Yo nāccasūri, na paccasūri 'sabbāṃ vitathā idan' ti ñatva loke |  
so bhikkhu jāhāti oraparāṇi utago jīṇaṃ iva tacāṃ purāṇaṃ ||

2. Write short explanatory and critical notes on any FOUR of the following :— 16

- (a) *Esa dhammo smantano.*  
(b) *Digho bālānaṃ saṃsāro*  
(c) • *Gaḥakāraka dūttho 'si.*  
(d) *Bhoviṇḍi nāma so hoti.*  
(e) *Na tena bhikkhu bhavati.*  
(f)  *Eko care khaggavisūṇakappo,*

3. Explain any ONE of the following two stanzas in Pāli :— 7

- (a) Muñca pure, muñca pacchato, majjhe muñca bhava'ssa pāragū |  
sabbattha vimuttamānaso na puna jātijaraṃ upahisi ||
- (b) Piya pahūtā kalaha-vivādā paridevasokā sahamacchari ca |  
mānātīmānā sahapasunā ca macchariyayuttā kalahā vivādā ||

4. Either, Cite instances of archaism from your texts. How would you account for them ? 7

Or, Comment on the poetry of the *Dhammapada*. 7

5. Give the substance either of the *Khaggavisūṇa* or of the *Muni-Sutta*. 10

6. Either, What are the various ethical ideals set forth in different *vaggas* of the *Dhammapada* ? 10

Or, What is the picture of social life which may be drawn from hints in the *gāthās* of the *Dhammapada* ? 10

7. Translate ONE of the following two extracts into English :— 30

- (a) Pāṇaṃ na hane, na cādinnaṃ ādiye |  
musā na bhāse, na ca majjapo siyā ||  
Abrahmacariyā virameyya metthunā |  
rattiṃ na bhunjeyya vikālabhojanaṃ ||  
Mālaṃ na dhāraye, na ca gandhaṃ ācare |  
mañice chamāyaṃ va sayetha santhate ||  
Etaṃ hi aṭṭhaṅgikaṃ āh' uposathaṃ |  
Buddhena dukkhantaṅgaṇā pakāsitaṃ ||  
Tato ca pāto upavutthuposatho annena pānena ca bhikkhusaṅghaṃ |  
pasannacitto anumodamāno yathārahaṃ saṃvibhajetha viññū ||
- (b) Yaṃ pare sukhato āhu tad ariyā āhu dukkhato |  
yaṃ pare dukkhato āhu tad ariyā sukhato vidu ||  
Passa dhammaṃ durājanaṃ, sampamūh' ettha aviddasū |  
nivuttānaṃ tamo hoti, andhakāro apassataṃ ||  
Sataṃ ca vivaṭaṃ hoti āloko passatāṃ iva, |  
saṅkhe na vijānanti magā dhammass' akovidā ||  
Ko nu aññatram ariyehi padaṃ sambuddhaṃ arahati |  
yaṃ padaṃ sammadaññāya parinibbanti anāsavaṃ ||

## SECOND PAPER

*The Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Ascertain the date of composition of *either* the *Milindapañha* or the *Dhammapadaṭṭhakathā*, stating your arguments. 8

(b) *Either*, Name the various sections in which the *Milindapañha* is subdivided. 4

*Or*, Give an account of the scheme of the *Dhammapadaṭṭhakathā*.

2. *Either*, Give a short sketch of the life of Nāgasena. 8

*Or*, Relate the *atītavatthu* of Cūḷapanthaka-thera.

3. *Either* Show how Nāgasena justifies Buddha's action in ordaining Devadatta though he foresaw that Devadatta would cause *Saṅgha-heda*, for which he would suffer in hell. 10

*Or*, Give an exposition of the following lines in the light of your text :—  
Atītassa ca addhānassa anāgatassa ca addhānassa paccupannassa ca addhānassa avijjā mūlaṃ.

4. Explain fully :— 8

*Either*, (a) Sīle patitthāya naro sapañño  
cittaṃ paññaṃ ca bhāvayamī  
ātāpi nipako bhikkhu  
so imāni vijaṭṭhaye jaṭan ti.

*Or*, (b) Uṭṭhānavato satimato  
sūcikkammaṃ nissammakārino  
saññitassa ca dhāmmajīvino  
appamattassa yaso 'bhivaḍḍhati ti.

5. (a) Identify any THREE of the following places :—Sāvatti, Vesālī, Rājagaha, Takkaṣiḷā, Sāgala. 3

(b) Enumerate the ten duties of a *upāsaka*.

6. Translate into English the passage (c) and any ONE of others :— 16

(a) Rājā āha : Bhante Nāgasena, tumhe bhaṇatha : pākatika-aggito nerayiko aggi mahābhūtāpataro hoti, khuddako pi pāsāṇo pākatiko aggimhi pakkhitto divasam pi dhamamāno na vilayaṃ gacchati, kuṭṭhāramatto pi pāsāṇo nerayikaggimhi pakkhitto khaṇena vilayaṃ gacchatīti : etaṃ vacanaṃ na saddahāmi.

(b) Tassa pañhaveyyākaraṇena tuṭṭho rājā therāṃ Nāgasenaṃ sata-sahasasagghanakena kambalena acchādetvā : Bhante Nāgasena, *ajjatagge* te atthasataṃ bhataṃ paññāpemi, yaṃ kiñci antepure kappiyaṃ tena ca *pavāremīti* āha.—Alaṃ mahārāja, jīvāmi.—Jānāmi bhanto Nāgasena jīvasi, api ca attānaṃ ca rakkha mamaṃ ca rakkhāhi.

(c) Atha Bhagavā dhammasabhāyaṃ imāni kathāpavattim ātva : “ajja mavā gantum vattatī” ti Buddhasēyyāya utthāya *surattadupaṭṭaṇi* nivāsetvā vijjulatāni viya kāyabandhanāni bandhitvā rattakambalassadisāni sugatamahā-civaraṃ pārupitvā surabhi-gandhakuṭito nikkhamma *mattavaravāraṇasīhavi-kantavilāsa*ṇa anantāya Buddhāliṅhāya dhammasabhaṃ gantvā alaṅkata-maṇḍalamajje *supaṇṇattavarabuddhāsaṇaṃ* abhiruyha *chabbāṇabuddha-raṇisiyo* vissajento annavakucchiṃ khobhayamāno Yugandharamatthake bhāsa-suriyo viya āsanamajje nisīdi.

7. (a) Write grammatical notes on any THREE of the italicized words in Question 6 (a) and (b). 3

- (b) Expound the Samāsas in THREE of the italicized words in Question 6 (c). 5

8. Translate into English any TWO of the following extracts :— 30

(a) Eko kira Sāvattvivāsi kulaputto natthagoṇaṃ pariyesanto araṇṇaṃ pavisitvā majjharūṭṭikakāle goṇaṃ disvā yūthe vissajetvā, "avassaṃ ayyānaṃ santike āhāramattaṃ labhissāmi" khuppipāsā pīḷito vihāraṃ pavisitvā bhikkhūnaṃ santikaṃ gantvā vanditvā ekamantaṃ atṭhāsi. Tasmīn kho pana samaye bhikkhūnaṃ avakkārapātiye bhuttāvasesaṃ bhattaṃ hoti te taṃ chātakaṃ pīḷitaṃ disvā, "ito bhattaṃ hoti, gahetvā bhuñjā" ti vadimsu.

(b) Sāvattthiyaṃ kira 'pañcasatā' bhikkhū Satthu santike yāva arabhattā kammaṭṭhānaṃ gahetvā "samaṇadhammaṃ karissāmā" ti yojanasatamattaṃ gantvā ekaṃ mahāgāmaṃ agamaṃsu. Atha ne manussā disvā paññattāsane nisīdāpetvā pañtehi yāguādīhi parivisitvā, "kattha bhante gacchathā" ti pucchitvā, "yathāphāsukaṭṭhanam" ti vutte, "bhante, imaṃ temāsaṃ idh' eva vasatha, mayam pi tumhākaṃ santike saraṇesu paṭiṭṭhāya sīlāni rakkhissāmā" ti yācitvā tesaṃ adhiवासनाṃ viditvā, "avidūre ṭhāne mahanto vanasaṇḍo atthi, ettha vasatha bhante" ti vatvā uyyojesuṃ; bhikkhū taṃ vanasaṇḍaṃ pavisiṃsu.

(c) Sāvattthiyaṃ kira Anūthapiṇḍikassa gahapatino Nando nama gopālako goyūthaṃ rakkhati aḍḍho mahaddhano mahābhogo. So kira yathā Keṇiyo jaṭṭilo pabbajāvāsena evaṃ gopālakattena rūjapiḷaṃ pariharanto attano kuṭumbaṃ rakkhati. So kālānukūlaṃ pañca gorase ādāya Anūthapiṇḍikassa santikaṃ gantvā Satthāraṃ pasati dhammaṃ suṇāti, attano vasaṇḍaṭṭhānaṃ āgamanatthāya Satthāraṃ yācati.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

#### GROUP A

#### Not for Burman Students.

1. (a) Construct short sentences in Sanskrit to illustrate the use of two of the following words :— 3

जात, ननु, नृनम्, and प्रायः ।

- (b) Account for the case-ending in THREE of the words underlined :— 3

दूरादागतः; वनाय गच्छति; अन् गङ्गाय; विद्यया ययः; and देवदत्ताय श्रुतं चारयति ।

- (c) Name and expound the *samāsas* in TWO of the following :— 3

मन्थाङ्ग, घनश्याम, विलोचन and श्रौतीश्याम् ।

2. Correct errors in THREE of the following sentences :— 6

(a) प्राचिन्धः दयां करोति साधवः ।

(b) आगते सभाश्याम् सा गतवान् ।

- (c) भीजनं समाप्ता वनं गच्छिष्यति ।  
 (d) मङ्गराजा मन्त्रिणान् सह अत्रागतः ।  
 (e) मां सुवर्षं ददाहि ।

## GROUP B

- (a) Join by *sandhi* :—*rājā + iva* ; *gena + idha* ; *tathā + eva* ; and *te + ahaṇi*. 2  
 (b) Decline fully either *dhātū* or *guṇavā*. 3  
 (c) Conjugate *div* (to shine) or *śu* (to hear) in the optative and *pas* (to see) or *bluṣ* (to eat) in the aorist. 3  
 (d) Derive and give the derivative meaning of any THREE :—  
*antimo*, *dovārika*, *bhojāpeti*, *pāka*, and *odumbarāṇi* 3  
 (e) Illustrate by short sentences the use of the fourth case-ending in Pāli. 4

## GROUP C

Attempt any FOUR question only.

1. State in brief the causes which lead to phonetic change. 10
2. Give a short account of the languages forming the Indo-Aryan group. 10
3. Show that the Vedic language has preserved some of the oldest features of the Indo-Germanic language. 10
4. Explain, with examples drawn from Sanskrit and Prākṛit, the terms :—*prothesis*, *syncope*, and *regressive assimilation*. 10
5. Define 'dialect' and determine the causes of the development of dialects. 10
6. Show by examples that the Prākṛits through the inscripational dialects reach back to the Vedic language directly. 10

## GROUP D

Translate into Pāli :—

20

(a) Whatever friend a king honours, whether he be good or evil, devoted to vice or virtue, the king falls into his power. One in constant intercourse affects his fellow just as a poisoned arrow defiles a pure quiver. Let not the wise become the friend of the wicked for fear of contamination. If a man ties up stinking fish with a band of kusa grass, the grass will acquire a putrid smell; so is intimacy with a fool.

(b) There trees of every shape and size, there flowers of every hue,  
 All shrubs and bushes, high and low, are spread before the view ;  
 The breezes sweetly waft the scent from flowers white, blue, and red  
 That grow about the herbitage wherein the fire is fed.  
 Close round about the water's edge grow many plants and trees.  
 Which tremble as they echo to the murmurs of the bees.

## ALTERNATIVE TO GROUP A

## For Burman Students Only.

1. Name and expound the *samāsas* in the following :—

5

*paṇisotaṃ*, *upasaradaṃ*, *dāsiddasaṃ*, *tisīṅgaṃ*, and *anantañāno*.

2. Illustrate with short sentences the different ways in which gerunds are formed in Pāli. 5

3. Write grammatical notes on the following words in italics:— 5

- (a) *Ajīvikā bhikkhusu* abhivāḍenti
- (b) *Pāpasmim* ramati mano.
- (c) *Gaṅgāyaṇ* ghoso.
- (d) *Suvavayanaṇ* taṁ maññe.
- (e) *Gotlena* Gotamo nātho.

## ARABIC HONOURS

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Answer any THREE of the following:— 18

(a) Write a biographical account of Abu-l-'Atāhiyah and state whether precept and practice corresponded in him.

(b) The 'matter of Britain' consists of the legends of King Arthur and his knights. Did early Arabic poetry have any such 'matter' or body of traditional material to work over?

(c) Write a short account of *برئام الطائي* and of the tribe 'Tayyi'.

(d) 'Arabic poetry in its form betrays its origin from satire and verb'. Discuss this statement.

2. Translate the following passages into English:— 1

(a)

اشدّ الجهاد جهاد الهوى \* وما كرم المرء إلا التقى  
واخلاق ذى الفضل معروفة \* يبذل الجميل وكف الذى

وكل السفكحات مملوكة \* و طول التعاشر فيه القلى  
 و كل طريف له لغة \* و كل نليد سريع البلى  
 و لا شئ الا له آفة \* و لا شئ الا له منتهى  
 و ليس الغنى نشب فى يد \* و لكن غنى النفس كل الغنى  
 و انما لفى صانع ظاهر \* يدل على صانع لا يرى  
 (٨)

فحتى متى انت ذر صبة \* كان لست تزداد الا صغر  
 تعمل فى الارض طول الحيرة \* و عمرى يزداد فيها قصر  
 ارى لك ان لا تملّ الجهاز \* لقرب الرحيل و بعد السفر  
 و ان تتدبر ما ذا تصير \* اليه فتعمل فيه الفكر  
 و ان تستخف بدار الغرور \* و ان تستعد لحدى الكبر

3. (a) Parse according to Arab grammarians the *bayts* beginning :— 18  
 فحتى متى انت ... and و ان لفى صنع ...

(b) Write notes on the words and expressions underlined in the passages in Question 2.

(c) *Either*, From the passages in Question 2 show by what arts this composer constructed his poem.

*Or*, Mention the metre of the passage in Question 2 (a) and indicate the extent to which it has been used in poetry generally.

4. (a) Render into ARABIC the meaning of the following passage :— 14

جل رب احاط بالاشياء \* واحد ماجد بغير خفاء  
 جل عن مشبه له و نظير \* و تعالى حقاً على القراء  
 عالم السر كاشف الضر يعفو \* عن قبيح الافعال يوم الجزاء  
 ما على بابه حجاب و لكن \* هو من خلقه سميع الدعاء  
 لذ به ايها الغفل و بادر \* تحظ من فضله بنيل العطاء

- (b) Give the rules for the construction of the *الدعاء*.



5. (a) Explain carefully in English the meaning of the following passage :--

18

وانى على اشيء منك تريدنى \* قديماً لذو صفح على ذاك مجمل  
ستقطع فى الدنيا اذا ما قطعتنى \* يمينك فانظر اى كف تبدل  
وفى الناس ان رثت جبالك واصل \* وفى الارض عن دار القلى متحول  
اذا انت لم تنصف اخاك وجده \* على طرف الهجران ان كان يعقل  
ويركب حد السيف من ان نضيمه \* اذا لم يكن عن شفرة السيف مزحل  
وكنت اذا ما صاحب رام ظننتسى \* و بدل سوء بالذى كنت افعل  
قلبت له ظهر المجن فلم ادم \* على ذاك الاريث ما اتحول  
اذا انصرفت نفسى عن الشىء لم تكد \* اليه بوجه آخر الدهر تقبل

(b) Mention any figures of speech occurring in the above passage.

(c) Either, Parse and write notes on the form of the words underlined.

Or State whether these bayts could be considered as of ballad-nature.

6. (a) Translate into English :—

20

ونيرب من موالى السوء ذى حسد \* يفتات لحمى ولا يشفيه من قرم  
داربت صدرا طويلا غمره حقدا \* منه و قلمت اظفارا بلا جلم  
بالعزم و الخير اسديه و الحمة \* تقوى الله وما لم يرع من رحم  
فاصبحت قوسه دونى مورترة \* يرمى عدوى جهازا غير مكنتم  
ان من العلم ذلّ انت عارفه \* و العلم عن قدرة فضل من السرم

(b) The name of this composer is سالم الاسدى التابعى. Write a note on these epithets, on the age of this poem, its sentiments, and its Bedouin background.

(c) Scan fully ONE bayt in this passage and name the metre.

(d) Do the rules of Arab prosody permit of any variation of the rhythm or measure in a poem?

## SECOND PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. (a) Translate into English with reference to the context:— 15

(اولئك الذين يدعون) هم آلهة (يبتغون) يطلبون (الى ربهم الرسيطة)  
القربة بالطاعة (ايهم) بدل من وار يبتغون اي يبتغيها الذي هو (اقرب) اليه  
فكيف بغيره (و يرجون رحمته، ويخافون عذابه) كغيرهم فكيف بدعوتهم آلهه  
(ان عذاب ذلك كان معذورا - وان) ما (من قرية) اريد اهلها، (الا نحن  
مهلكها قبل يوم القيمة) بالموت (او معذبها عذابا شديدا) بالقتل وغيره (كان  
ذلك في الكتاب) اللوح المحفوظ (مسطورا) مكتوبا (وما منعنا ان نرسل  
بالآيات) التي اقترحها اهل مكة (الا ان كذب بها الاولون) لما ارسلنا فاهلكناهم و  
لو ارسلناها الى هؤلاء لكدبوا بها واستحقوا الاهلاك وقد حكمنا بامهالهم لاتمام  
امر محمد (و آتينا ثمود الناقة) آية (مبصرة) بينه واضحة (وظلموا) كفروا (بها)  
فاهلكوا (وما نرسل بالآيات) المعجزات (الا تخريفا) للعباد ليؤمنوا \*

- (b) Explain (ايهم) بدل من وار يبتغون in the above passage. 3

- (c) Comment on the interpretation of الكتاب by اللوح المحفوظ in the above passage. 4

- (d) Give the various kinds of استثناء with their grammatical peculiarities, and point out to which of them (الا ان كذب بها الاولون) in the above passage belong. 6

- (e) Explain fully ثمود الناقة in the above passage. 6

2. (a) Give the context and translate into English:— 15

فقلت لها تريدين، اين قالت سبحان الذي اسرى بعده ليلا من المسجد  
الحرام الى المسجد قصي، فعلمت انها قد قضت حجبها وهي تريد بيت  
المقدس - فقلت لها انت منذ كم في هذا الموضع قالت ثلاث ليال سويا -

فقلت ما ارى معك طعاما تاكلين' قالت هريطعمنى و يستقننى - فقلت  
فباى شىء تترضين' قالت فلم تجدوا ماء فقيموا صعيدا طيبا - فقلت لها ان  
معى طعاما فهل لك في الاكل' قالت ثم اتموا الصيام الى الليل - فقلت  
لهمس هذا شهر رمضان' قالت فمن تطوع خيرا فان الله شاكر عليم - فقلت قد  
ابيم لنا الافطار في السفر' قالت و ان تصوموا خير لكم ان كنتم تعلمون - فقلت  
ليم لا تكلميني مثل ما اكلمك قالت ما يلفظ من قول الا لديه رقيب عتيد -  
فقلت فمن لي الناس انت' قالت و لا نقف ما ليس لك به علم ان السمع  
و البصر و الفؤاد كل اولئك كان عنه مسئولا - فقلت اخطأت فاجعليني في  
حل' قالت لا تشرب عليكم اليوم يغفر الله لكم \*

(b) Comment on the above passage and discuss how far the lady succeeded in expressing her ideas. 5

(c) Differentiate between:—

(i) قلت به and قلت له (ii) اخطأت and خطأت 5

(iii) قطع and قَطَعَ (iv) تَنَصَّرَ and اِنْتَصَرَ

(v) ضَارِبًا and تَضَارِبًا

3. Give in your own Arabic a brief description of the خلافة of ابو العباس. 15

4. Give a brief sketch of the character of الرشيد. 7

5. (a) Translate into English with reference to the context:— 10

و قال يا من يملك حوائج السائلين و يعلم ضمير الصامتين فان لكل  
مسألة منك ردا حاضرا و جوابا عتيدا و لكل صامت منك علم محيط ناطق  
بمواعيدك الصادقة و ايديك الفاضلة و رحمتك الواسعة ' صل على محمد  
و على آل محمد و اغفر لنا ذنوبنا و كفر عنا سيئاتنا - يا من لا تضرة الذنوب و  
لا تخفى عليه العيوب و لا تنقصه مغفرة الخطايا ' و يا من كبس الارض على

الماء و سدّ الهواء بالسماء ، واختار لنفسه الاسماء ، صلّ على محمد و خر لي  
 في جميع امري . - يا من خشعت له الاصوات ، بالوان اللغات يسألونك  
 العاجات ، ان من حاجتي اليك ان تغفر لي اذا ترفيتني و صرت في لعدي  
 و تغفّق علي اهلي و ولدي - السلام لك الحمد حمدا يفضل على كل حمد  
 كفضلك على جميع الخلق - اللهم صلّ على محمد صلوة تكون له رضى و صلّ  
 على محمد صلوة تكون له حرزا و اجزة عنا خير الجزاء في الآخرة و الاولى -  
 السلام احينا سعداء و ترفنا . شهداء ، اجعلنا سعداء مرزوقين ولا تجعلنا اشقياء  
 مكرمين \*

(b) Write etymological notes on the words underlined in the above passage. 4

6. Correct or justify any six of the following, giving reasons:— 6

(١) زيد في الدار (٢) قال ان الله واحد

(٣) صار المطر (٤) الرجال جاءني

(٥) الشمس البارغ طالع (٦) غلام الزيد مسلم

(٧) سأل على حاجة (٨) انى اذن اكرمك

### THIRD PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English any two of the following extracts:—

A

35

يا كاشف الهم يا منجى من الكرب \* يا غافر الذنب للعاصي اذا يتب  
 يا آله السماء و الارض يا املى \* ويا ملاذى و يا فخرى و يا اربى

يا خالق الخلق منشيهم بقدرته \* بلا معيس ولا كيد ولا تعب  
يا مالك الملك لا مالك يذاعج \* يا حاضرا قط لم يبعد ولم يغيب  
يا قادرا قهرا ادعوك مبهلا \* هاء من بات في هم وفي نصب  
يا حاضرا نظرا في كل خافية \* لم يحف عنك من الاخفاء مستعجبى  
ادعوك يا رب الغماء تكشفه \* فانك الله حقبا كاشف الكرب  
انت المهيمن انت الله خالقنا \* و الحق قلت بلا زور ولا كذب  
قد جئت ادعولمن يدعى لكشف انى \* يا رب يا رب با رحمن فاستجب  
بحرمة الانبياء المرسلين و ما \* انزلت من صحف تنلى ومن كتب  
و بالجباه التى فى الارض ساجدة \* منها قياما و اجلسا على الركب  
اقبل على بوجه منك فيه رضى \* فمن رضيت عليه قد رضى و حبى  
يسر على امورى كلها و امن \* فكم منذت و كم انجيت من عطب  
حقق بحقق ظنى فيك يا املى \* من احسن الظن بالهمم لم يخب

B

35

يا بنى اعلم ان الله جعل الناس كلهم مثل بعضهم فى الخلقة لانه خلق  
لجميعهم قلوبا يعقلون بها و عيونا يبصرون بها و آذانا يسمعون بها و انوا يشمرون  
بها و احساسا فى بدنهم يميزون به الاشياء اللينة من الخشنة و ركبتهم كلهم من  
لحم و دم و عظم فالاشياء التى تؤذى واحدا منهم و تضره تؤذى غيره و تولمه و  
الاشياء التى تسر ادحهم و تفرحه تسر غيره انهم جميعهم مثل بعضهم فى تركيب  
خلقتهم و فى كل شىء - فكل الاشياء التى تسرك تسر غيرك و التى  
تضررك تضر غيرك فينجب عليك يا بنى قبل ان تعمل اى امر غيرك

ان تنظر اليه و تفكر فيه فان وجدت ان الغير لو فعله معك كنت تفرح به و  
لا تنضر منه فاقم على عمله لان ما يسرك يسر غيرك و ان رايت انه لو  
وقع من غيرك بالنسبة لك كنت تتالم منه و تتكدر و لا تفرح فتباعد عن عمله  
و لا تصنع له ما يضرك يضر غيرك \*

C

35

حكى ان رجلين اعميين كانا يجلسان على طريق ام جعفر و كانت موصوفة  
بالكرم و كان احدهما ذا عيال و اهل و كان يقول اللهم ارزقنى من فضلک  
الواسع و كان الآخر عزبا لا اهل له و كان يقول اللهم ارزقنى من فضل ام جعفر  
فصارت ترسل للطالب من فضل الله درهمين و ترسل لطالب فضلها و غيقيين  
بينهما دجاجة مشوية فى بطنها عشرة دنائير لم تعلمه بها فكان يكره ذلك و يقول  
للآخر خذ هذين الرغيقيين و الدجاجة و اعطنى الدرهمين فيفعل ذلك فمضى  
على ذلك شهر ثم ارسلت ام جعفر تقول قولوا لطالب فضلا اما انذاك عطاؤنا  
فقال لهم قولوا لها ما اعطيتك فقالت ثلاثمائة دينار فقال لا والله بل كانت ترسل  
لى دجاجة و رغيقيين كل يوم و كنت ابيعها لصاحبى بدرهمين فقالت ام جعفر  
صدق الرجل انه طلب من فضل الله فاعطاه الله من حيث لا يحتسب و الآخر  
طلب من فضلنا فرحمه الله \*

2. Translate into Arabic:—

30

A certain person used every day to buy six loaves of bread. One day, one of his friends asked him, saying, 'What dost thou do with the six loaves every day?' That person replied to him thus: 'I keep a loaf of bread for myself, and I throw away a loaf, and I give back two loaves, and the other two loaves I lend'. His friend said: 'I don't understand at all what thou hast said; explain more clearly'. That person said in reply: 'The loaf which I keep for myself I eat; and that which I throw away I give to my mother-in-law; and those two loaves which I give back, I give to my father and mother in exchange for those which they gave to me in my childhood; and those two loaves which I lend, I give to my two sons in order that they may give me a return in my old age'.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any THREE of the following passages into English: — 15

(a)

ان الرسول لنور يستضاء به \* مهتد من سيف الله مسلول  
فى عصبة من قرش قال قائلهم \* ببطن مكة لما اسلموا زلوا  
زالوا فما زال انكاس و لا كشف \* عند اللقاء ولا ميل معاذيل  
شم العرانين ابطال لبوسهم \* من نسج دارد فى الهيبة سرايل  
بيض سرايف قد شكت لها حلق \* كانه حلق القفيعاء مجدول

(b)

هل غادر الشعراء من متردم \* ام هل عرفت الدار بعد تروم  
يا دار عبلة بالجواء تكلمى \* وعمى صباحا دار عبلة ر اسلمى  
فرقت فيها ناقتى و كانها \* فمن لاقضى حاجة المتلوم  
وتحل عبلة بالجواء و اهلنا \* بالحزن فالصمان فالمتثلّم  
حييت من طلل تقادم عهده \* اقربى و اقرب بعد ام الهيثم

(c)

باتت واسبل و اكف من ديمة \* تروى الخمائل دائما تسجماها  
يعلو طريقة منتهى متواتر \* فى ليلة كفر النجوم غمامها  
تجنّاف اصلا قالصا متنبذا \* بعجرب انقاء يميل هيماها  
وتضىء فى وجه الظلام منيرة \* كجمانة البحرى سل نظمها  
حتى اذا انحسر الظلام \* و اسفرت بكت نزل عن الثرى اظامها

(d)

فمن لنا سرب كن نعاجه \* عذارى دوار فى ملاء مزيل  
فادبرن كالجزع المفصل بيذه \* بجعيد معم فى العشيرة مخول

فالتفتة بالهاديت و دونه \* جوارها فى مرة لم تؤيل  
 فعلى عدا بين ثور و نعجة \* دبا كا و لم يفضم بماء فيغسل  
 فظل طهاة اللحم من بين منضم \* صفيق شراء ار قدير معجل

2. Answer any two of the following questions:— 14

(a) With regard to the style of Imru-l-Qais it has been said : **كلام المارك**,  
 Justify or refute this remark, stating your reasons in each case.

(b) What are the chief features of Zuhair's poetry? Into how many parts would you divide his Mu'allaqah? Give a summary of each part.

(c) Give in Arabic a short account of the life of Labid.

3. Explain with reference to the context any two of the following extracts:— 15

(a)

يا ساكنى البطحاء هل من عردة \* احيى بها يا ساكنى البطحاء  
 ان ينقضى صبرى فليس بمنقضى \* وجدى القديم بكم ولا برحائى  
 ولئن جفا الرسمى ما حل تربكم \* فعدامعى تربى على الانواء  
 وا حسرتى ضاع الزمان و لم افز \* منكم اهيل مودتى بلقاء  
 و متى يؤمل راحة من عمرة \* يومان يوم قلى و يوم تناء

(b)

سقىا لايام مضت مع جيرة \* كانت ليالينا بهم افراحا  
 حيث الحمى وطنى و سكن الغضا \* سكنى و وردى الماء فيه مباحا  
 و اهيله اربى و ظل نخيله \* طربى و رحلة و ادييه مراحا  
 قسما بمكة و المقام و من اتى \* البيت الحرام ملبيا سياحا  
 ما رنحت ريم الصبا شيخ الربى \* الا و اهدت منكم ارواحا

(c)

و قالوا شربت الائم كلا و انما \* شربت التى فى تزكها عندى الائم  
 هنيا لاهل الديركم سكروا بها \* و ما شربوا منها و لكنهم هموا



و عندى منها :نشوة قبل نشأتى \* معنى ابدأ تبقى وان بلى العظم  
عليك بها صرفا وان شئت مزجها \* فعدلك عن ظلم الجيب هو الظلم  
فدونكمها فى الحان واستجلبها به \* على نغم الالكان فهى بها غنم

4. (a) Write a note on the mystic symbolism of Ibnu-l-Farid. Illustrate your answer with examples. 7

(b) Point out the figures of speech in the extracts of Question 3. 4

(c) Explain the underlined words in Question 3 according to the rules of Arabic grammar. 4

5. Paraphrase in clear and simple Arabic any two of the following extracts:— 12

(a)

الرب يوم كان منهن صالح \* ولا سيما يوم بدارة جبلجل  
و يوم عقرت للعدارى مطيتى \* فيا عجباً من كورها المتحمل  
فذل العذارى يرتمين بلحمها \* وشحم كهداب الدمقس المقتل

(b)

فوقفت اسأله وكيف سؤالنا \* صما خوالد ما يبدىن كلامها  
عريت و كان بها الجميع فابكروا \* منها وغودر نؤئيبها و ثمامها  
شاقنك ظعن الحى حين تحملوا \* فتكنسوا قطناً تصر خيامها

(c)

غلباء و جزاء علموم مذكرة \* فى دقها سعة قدامها ميسل  
و جلدها من اطوم لا يؤيسه \* طلم بضاحية المتنين مهزول  
حرف اخرها ابها من مهجنة \* و عمها خالها قوداء شمسيل

6. (a) Re-write extract (a) of Question 5 with full vowel-points. 5

(b) Scan the first line of each of the extracts in Question 5 and state the metre. 4

7. Translate into Arabic:—

20

They tell that an Arab of the desert got possession of a great ruby worth a large sum of money, and knew not its value. And one who knew its value saw it and bought it from him for a thousand dirhams. Then afterwards the Arab discovered its value, and his comrades reproached him, saying, 'Why didst thou not ask more for it?' He answered, 'If I had known of any number greater than a thousand, I would have demanded it'.

## FIFTH PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English ONE of the two following passages:— 25

(a) فقدم اليه سطيم قبل شق فقال له انى قد رأيت روبا هالتنى و  
 فطعت بها فله خبرنى بها فأنك ان أصبتها أصبت تأويلها فقال أفعل رأيت  
 حممه - خرجت من ظلمه - فوقعت باض تهمة - فأكلت منها كل ذات جمجمه -  
 فقال له الملك ما اخطأت منها شيا يا سطيم فما عندك فى تأويلها قال  
 أحلف بما بين الحرتين من خش - لتتهبطن أرضكم الحبش - فاتملىكن ما  
 بين ابين الى جرش - فقال له الملك وأبيك يا سطيم ان هذا لذا لغائظ  
 مرجع فمتى هذا كائن أ فى زمانى ام بعده قال لا بل بعده له بحين أكثر من  
 سنين او سبعين ويمضين من السنين قال أفيدوم ذلك من ملكهم ام  
 ينقطع قال بل ينقطع لبضع و سبعين من السنين ثم يقتلون ويخرجون منها  
 هاربين قال ومن يلى ذلك من قتلهم وأخرجهم قال يليه ارم ذى يزن -  
 يخرج عليهم من عدن فلا يترك منهم أحدا باليمن - قال أفيدوم ذلك من  
 سلطانهم ام ينقطع قال لا بل ينقطع قال ومن يقطعه قال نبى ذكى يأتيه  
 الرحى من قبل العلى \*

(b) (و باركنا عليه) على ابراهيم فى اولاده (و على اسحق) بان اخرجنا  
 من صلبه انبياء بنى اسرائيل وغيرهم كايوب وشعيب وأفضنا عليهم بركات  
 الدين والدنيا - و قري و بركنا (و من ذريتهما محسن) فى عمله او الى نفسه  
 بالآيمان والطاعة (و ظالم لنفسه) بالكفر والمعاصى (مبين) ظاهر ظلمه وفي  
 ذلك تنبيه على ان النسب لا اثر له فى الهدى والضلال و ان الظلم فى  
 اعقابها لا يعرد اليهما بتيقصة وعيب (و لقد مبنا على موسى و هارون)

انعمنا عليهما بالنبرة و غيرها من المنافع الدينية و الدنيوية ( و نجيناها و قومهما  
من الكرب العظيم ) من تغلب فرعون ( و الغرق و نصرناهم ) ثم الضمير لهما مع  
القوم ( فكانوا هم الغالبين ) على فرعون و قومه ( و آتيناها الكتاب المستبين )  
البليغ فى بيانه و هو التوراة ( و هديناهم الصراط المستقيم ) \*

2. Reproduce in simple Arabic the story of Abraham's sacrifice of his son, as given in your text from the Qur'an. 15

3. Give the substance of Ibn Khaldun's theory of النبوة. 15

(Or,

Give the substance of Ibn Khaldun's theory of الكهانة)

4. What is النفس اللوامة ? Give its various meanings according to the Kesshaf. 15

5. Explain : الحقيقة و المجاز. 10

(Or,

Show the difference between الكذب and الاستعارة.

6. Translate into Arabic:— 20

*A peacock and a pigeon :*

'In the days of old, the birds lived at random in a lawless state of anarchy ; but in time they began to be weary of it, and moved for setting up a king. The peacock valued himself upon his gay feathers, and put in for the office. The pretenders were heard, the question debated ; and the choice fell upon King Peacock. The vote was no sooner passed, but up stands a pigeon with a speech in his mouth to this effect: "May it please your Majesty," says he, "we should be glad to know, in case the Eagle should fall upon us in your reign, as she has formerly done, how you will be able to defend us".'

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

### A

#### RHETORIC AND PROSODY

*Answer any THREE questions.*

1. Scan the following and name the metre:—

ستبدى لك الايام ما كذت جاهلا \* وياتيك بالابحار من لم تزود

2. Define (a) الأضمار (b) الخبث and indicate the difference between العلة and الزحاف 10

3. Define الاستعارة Indicate the kind of الاستعارة in the following verse :— 10

وإذا المنية انشبت اظفارها \* الغيت كل نسيمة لا تنفع

4. Elucidate and illustrate the following : 10

- (a) مراعاة النظر (b) الاستخدام (c) حسن التعليل  
(d) الطباق

## B

## HISTORY OF ARABIC LITERATURE

*Answer any FOUR questions.*

1. Estimate the literary and historical value of the legends of the pagan Arabs. 10
2. Give an account of the growth and development of *ḥadīth* literature, and determine its literary value. 10
3. Write a critical note on the Maqāmāt of al-Ḥarīrī. 10
4. Give an account of the contribution of the Arabs to medicine, science, and astronomy. 10
5. Write notes on any FOUR of the following:—(a) *Alf Laila wa Laila*; (b) Ibn Hānī; (c) Ibn Rushd; (d) Ibn Khaldūn; (e) Ibn al-Muqaffa. 10

## C

## MUSLIM HISTORY

*Answer any THREE questions.*

1. Give an account of the life of the prophet prior to his mission. 10
2. Give an account of the rise of the Faṭimids of Egypt, and state the causes of their success. 10
3. Estimate the character and achievements of Malik Shāh. 10
4. Write notes on any four of the following:—(a) the Almoravids (b) Tūriq, (c) Alḥamra, (d) Sulṭān Sanjar, (e) Ḥasan Sabbāḥ. 10

## PASS

Examiners— { KHAN BAHADUR MD. MUSA, M.A.  
 MALVI ABU USMAN KHALID, M.A.  
 PROF. MOHAMMAD ZUBAIR SIDDIQUI, M.A., PHD.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following passages:— 16

(a)

ما زالت الدنيا منغصة \* لم يخل صاحبها من البلوى  
 دار الفجائع و الهموم و دار \* البؤس و الحزان و الشكوى  
 بينما الفتى فيها بمنزلة \* اذ صار تحت ترابها ملقى  
 تقفر مساريها محاسنها \* لا شئ بين النعى و البشرى  
 و لقل يوم ذر شارقه \* الا سمعت بهالك ينعى  
 لا تعتبى على الزمان فما \* عند الزمان لعائب عتبى

(b)

طلبت المستقر بكل ارض \* فلم ار لى بارض مستقراً  
اطعت مطامعى فاستعبدتنى \* و لو انى قنعت لكنت حراً  
 من المتقارب

امنى تخاف انتشار الحديث \* و حظى قى مرنه اوفر  
 و ا ولم يكن فيه معنى عليك \* نظرت لنفسى كما تنظر  
 (c)

و قدّم لذاك فانّ الفتى \* له ما يقدم لا ما ينذر  
 و من يك ذا سعة من غنى \* يعظم و من يفقر بحقر

و من كان بالدهر ذا عزة \* فأنى من الدهر عندى خبر  
 ترى الدهر يضرب أمثاله \* لنا ويزينا صروف العبر  
فلأتمنن له عشرة \* نكس من كريم به قد عسر  
 يحول على المرء حتى تراه \* يشرب بعد صفاء الكدر

2. (a) Parse and write notes on any six of the words and expressions underlined in Question 1. 16

(b) Analyse according to Arab grammarians the *bayt's* beginning:—

و كان بالدهر ... and ولقل يوم ذر

(c) Write out any THREE *bayt's* in Question 1 (a) with full vowel-points.

3. (a) To whose courts did Abu'l 'Atāhiyah become attached? What were the advantages and disadvantages of such court-patronage? 14

(b) Write an explanatory note on the *kunyah* أبو الغناية.

(c) In what circumstances did Abū Tammām collect the *lamārah*? What is meant by calling it an 'anthology'?

4. Explain in English the meaning of the following:— 18

(a)

وانى لتراک الضغينة قد بدا \* تراها من السولى ذلا استثيرها  
مخافة ان تجنى على وانما \* يهيج كبسرات الامور صغيرها  
لعمرى لقد اشرفت يوم عنيزة \* على رغبة لموشد نفسى مريها  
 تبين اعقاب الامور اذا مضت \* وتقبل اشباها عليك صدورها  
 اذا افتخرت سعد بن ذبيان لم تجد \* سوى ما ابتئنا ما يعد فخورها  
 فلا خير فى العيدان الا صلابها \* ولا ناهضات الطير الا صقورها  
 السم ترانا نور قوم وانما \* يبيس فى الظلاء للناس نورها

(b) Write explanatory notes on the words underlined.

(c) Either, What is the story of Shabīb and Yazīd as given in the narrative introducing these *bayt's*? Does the narrative explain the *bayt's*?

Or, Examine these *bayts* and state whether they are descriptive in nature or not. In view of the fact that some of them have been ascribed to other poets, state whether you consider they cohere together sufficiently to form one poem.

5. (a) Translate into English:—

18

(1)

و اعرض عن مطاعم قد اراها \* فاتركها ر في بطني انطواء  
فلا و ابيك ما في العيش خير \* و لا الدنيا اذا ذهب الحياء  
يعيش المرء ما استحيى بخير \* و يبقى العود ما بقي اللحاء

(2)

الم تعلمي اني اذا النفس اشرفت \* على طمع لم انس ان اتكرما  
و لست بلوام على الامر بعدما \* يفتول لكن عل ان اتقدما

(b) What is the significance of قد before اراها ?

(c) Write a short note on oaths and their use among the Arabs.

(d) Illustrate, with examples, the uses of the particle ما.

6. (a) Translate into English the following:—

18

و أنك لا تدري اذا جاء سائل \* ا أنت بما تعطيه ام هو أسعد  
عسى سائل ذو حاجة ان منعه \* من ليوم سولا ان يكون له غد  
و في كثرة الايدي لذى الجهل زاجر \* و كالحلم ابقى للرجال و اعد

(b) Parse the words underlined, and write notes on the form and meaning of الأيدي and الحلم.

(c) What is the Arabic word signifying the opposite of حليم and applied to a long period of Arab development?

(d) 'Abu Tammām places before us the living, Abu'l 'Atāhiyah skeletons., Discuss this statement.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English A' AND EITHER B OR C:—

22

A

(أَنْ هَذَا الْقُرْآنَ يَهْدِي لِلَّتِي) اِی لِلطَّرِيقَةِ الَّتِي (هِيَ اقْرُوم) اَعْدِلْ وَ  
اَصْرِبْ (وَيُدْشِرُ الْمُؤْمِنِينَ الَّذِينَ يَعْمَلُونَ الصَّالِحَاتِ اَنْ لَهُمْ اَجْرًا كَبِيرًا وَ)  
يَخْبِرُ (اِنَّ الَّذِينَ لَا يُؤْمِنُونَ بِالْآخِرَةِ اَعْتَدْنَا) اَعْدَدْنَا (لَهُمْ عَذَابًا اَلِيمًا) مَوْعِدًا  
هُوَ النَّارُ (وَيُدْعِ الْاِنْسَانَ بِالشُّرِّ) عَلَيَّ نَفْسُهُ وَاهْلُهُ اِذَا ضَجِرَ (دَعَاَهُ) اِی  
كَدَعَاَهُ لَهُ (بِالْخَبَرِ وَكَانَ الْاِنْسَانُ) الْجَنَسُ (عَجُولًا) بِالْاَدْعَاءِ عَلَيَّ نَفْسُهُ وَ  
عَدَمُ النَّظَرِ فِي عَاقِبَتِهِ (وَجَعَلْنَا اللَّيْلَ وَالنَّهَارَ اَيْتِنَيْنِ) دَالَتَيْنِ عَلَيَّ قُدْرَتِنَا  
(فَمَحَوْنَا اَيَّةَ اللَّيْلِ) اِی. طَمَسْنَا نَوْرَهَا بِالظَّالِمِ لَتَسْكُنُوا فِيهِ وَالاِضَافَةُ لِلْبَيَانِ  
(وَجَعَلْنَا اَيَّةَ النَّهَارِ مُبْصِرَةً) اِی مُبْصِرًا فِيهَا بِالضَّرْعِ (لَتَبْتَغُوا فِيهِ فَضْلًا مِنْ  
رَبِّكُمْ) بِالْكَسْبِ (وَلَتَعْلَمُوا) بِهِمَا (عَدَدَ السَّنِينَ وَالحِسَابِ) لِلْاَوَاقَاتِ (وَكَلَّ  
شَيْءٍ) يَحْتَاجُ اِلَيْهِ (فَصَلِّهِ تَفْصِيْلًا) اِی بِبَيِّنَاتٍ تَبَيَّنَتْ \*

B

قَالَ اللهُ تَعَالَى وَلَقَدْ يَسَّرْنَا الْقُرْآنَ لِلذِّكْرِ فَهَلْ مِنْ مُذَكِّرٍ سَمِيَ اللهُ تَعَالَى  
الْقُرْآنَ كَرِيمًا فَقَالَ تَعَالَى اِنَّهُ لَقُرْآنٌ كَرِيمٌ وَسَمَاءٌ حَكِيمَةٌ فَقَالَ تَعَالَى يَسَّرَ  
الْقُرْآنَ الْحَكِيمَ وَسَمَاءً مُجِيدًا فَقَالَ تَعَالَى ق وَالْقُرْآنَ الْمَجِيدَ اَنْزَلَهُ اللهُ  
تَعَالَى عَلَيَّ سَيِّدِ الْاَنَامِ وَخَاتَمِ الْاَيُّمَاءِ الْكَرَامِ عَلَيْهِ وَعَلَيْهِمْ اَفْضَلُ الصَّلَاةِ وَ  
السَّلَامِ فَكُلُّ مَنْ اعْظَمَ مُعْجَزَاتِهِ اِنْ اَعْجَزَ اللهُ الْفَصْحَاءُ عَنْ مُعَارَضَتِهِ وَعَنْ  
الِاِيْتِنَاءِ بِأَيَّةٍ مِنْ مِثْلِهِ قَالَ تَعَالَى قُلْ فَاتَرَوْنَ بَسْمُورَةً مِنْ مِثْلِهِ وَقَالَ تَعَالَى  
قُلْ لَنْ يَجْتَمِعَ الْاِنْسَانُ وَالْجِنُّ عَلَيَّ اِنْ يَأْتُوا بِمِثْلِ هَذَا الْقُرْآنِ لَا يَتَرَوْنَ



بمثله ولو كان بعضهم لبعض ظهيراً \* فهو النور المبين والحق المستبين لا شيء اسطع من اعلامه ولا اصدع من احكامه ولا افصح من بلاغته ولا ارجع من فصاحتها واكثر من افادته ولا الذم من تلاته قال رسول الله صلي الله عليه وسلم القرآن فيه خبر من قبلكم ونبأ من بعدكم وحكم ما بينكم وقال ايضاً اصغر البيوت بيت صغر من كتاب الله تعالى \* وقال الشعبي النبي يقرأ القرآن انما يحدث عن ربه عز وجل \*

C

كان المأمون شهماً بعيد الهمّة ابي النفس \* وكان نجم بنى العباس في العلم والحكمة وكان قد اخذ من العلوم بقسط وضرب فيها بسهم وهو الذي استخرج كتاب اقليدس وامر بترجمته وتفصيله وعقد المجالس في خلافته للمناظرة في الدين والمقاتلات— وقالوا دخل المأمون بلاد الجزيرة والشام واقام بها مدة طويلة ثم غزا الروم وفتح فتوحات كثيرة وابلى بلاء حسناً— ولما اشتد بالمأمون علته بعث الى ابنه العباس فاتاه واقام عند ابيه أياماً وقد اوصى قبل ذلك الى اخيه ابي اسحاق وقيل لم يوص الا بالعباس حاضر الفقهاء والقضاة والقواد والكتاب وكانت وصيته هذا ما شهد عليه عبد الله بن هارون امير المو منين بحضرة من حضر اشهدهم جميعاً على نفسه انه يشهد ومن حضره ان الله عز وجل وحده لا شريك له حتى عد عقائد اهل السنة والجماعة ثم قال يا ابا اسحاق اني مامي وانظ بما تزي وخذ بسيرة اخيك في القرآن واعمل في الخلافة \* وقها الله عمل المرید الله الخائف من عقابه وعذابه ولا تغتر بالله ومهلة فكل قد نزل بك الموت ولا تعفل امر الرعيّة الرعيّة له عية !

2. (a) Explain the interpretation of **إِئْتَدْنَا** by **إِلَيْهَا** of **إِئْتَدْنَا** by **مَعَهَا** and of **فَصَلْنَا** by **بَيْنَا** in Question 1, A. 6

(b) Give **التركيب النحوي** of **الرعية الرعية** in Question 1, C. 4

(c) Give the roots (**ماده**) of :— 3

تعالى — معارضة — قُل — مستبين — ياترون — تلاوة

3. Correct or justify any FIVE of the following, giving reasons:— 5

- (١) ارجولا اكون من الضالين (٢) يا زيدا  
 (٣) يا عبد الله (٤) جاءنى قوم الا زيدا  
 (٥) رأيت رايته رايته (٦) انها قائم  
 (٧) لم يصيبه حزن

4. Explain with reference to the context:—

16

(a)

تصف الدهر الذى السقام ونبي الضنى \* كيما يصح به وانت سقيم  
 ونراك تصلح بالرشاد عقولنا \* ابدنا وانت من الرشاد عديم

(b)

وتجلى لى للشا متن اريهم \* اني لريب الدهر لا اتضع  
 واذا المنية انشبت اظفارها \* الفيت كل تميمة لا تنفع

(c)

هل علوم النجوم اغنت عن الما \* مرون شيأ ارملة المانوس  
 خلفرة بساحتى طرسوس \* مثل ما خلفوا ابيه بطرس

(d)

نهارك يا مغرور سهو غفلة \* وليك نوم والروى لك لازم  
يغرك ما يفني وتفرج بالمنى \* كما غر بالذات في النوم حالم

10. Give a short description of the خلافت of الوليد بن عبد الملك.

6. Render the following into simple Arabic:—

16

قال ايها الناس اني ابتليت بهذا الامر بغير راي مني ولا طلبه ولا مشورة من المسلمين واني قد خلعت ما في اعناقكم من بيعتي فاخترت لا نفسي غيري فصاح المسلمون صيحة واحدة قد اخترناك يا امير المؤمنين ورضيناك اميرنا باليمن والبركة فلما سكتوا حمد الله تعالى واثني عليه وصلي علي النبي صلعم ثم قال اوصيكم بتقوى الله فان تقوي الله تعالى خلف من كل شئ وليس من تقوي الله وخلف واعملوا لآخرتكم فان من عمل لآخرة كفاه الله من امر دنياه و آخرته و اصلحه سرائكم يصلح الله علانيتكم واكثروا ذكر الموت واحسنوا له الاستعداد قبل ان ينزل بكم فانه هادم اللذات و اني والله لا اعطي احدا باطلا ولا امنع احدا حقا يا ايها الناس من عطا الله وجبت طاعته ومن عصي الله فلا طاعة له اطيعوني ما اطعت الله فان عصيت الله فلا طاعة لى عليكم \*

9. (b) Describe the story of جارية كلابية and المأمون

(b) Write notes on any THREE of :—

9

عمر بن عبد العزيز — ابو جعفر المنصور — معاوية بن ابي سفيان —  
الز مخشرمي

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following extracts:--

85 (a) اخبر بعض الادياء قال حدثنا رجل من جيراننا ان الفضل مرفى يوم صائف منصرفا من المدينة يريد منزله فقلت له والله ما فى منزلى لا قليل ولا كثير فعطس الفضل فقلت يرحمك الله وقد كان سمع يمينى فامر بعض غلمانه ان يحملنى معه على دابته فلما صار بى الى قصره اخرج الى خمسة آلاف درهم وعشرة ائواب فانصرفت بها الى منزلى فقالت لى امرأتى والله لقد خرجت من عندنا وما تملك قليلا ولا كثيرا فمن اين سرقت هذا قال فاعلمتها الخبر فلم تصدق قولى واستراب الجيران بكالى وتناهى الخبر الى السلطان فطمع فى وجبسنى فقلت له انه كان من امرى كيت وكيت فرفع خبرى الى الفضل فامر باحضارى فلما احضرت ورأنى عرفنى وامر باطلاقى واعطانى خمسة آلاف اخرى وعشرة ائواب وقال تعهدنا لننفعك فلم يزل ينفعنى حتى حدث من امرهم ما حدث \*

85 (b) ايها الناس انكم لم تخلقوا عبثا ولم تتركوا سدى وان لكم معادا يحكم الله بينكم فيه فخاب وخسر من فظ من رحمة الله التي وسعت كل شيء وحرم الجنة التي عرضها السموات والارض واعلموا ان الامان غدا لمن حاف الله اليرم وباع قليلا بكثير وفانيا بباتى الا ترون انكم فى اسباب الها لكن وسيعلفها من بعدكم الباقون كذلك ترد الى خير الوارثين ثم انتم فى كل يوم تشيعرون غاديا اورائكما الى الله قد قضى نحبه وبلغ اجله ثم تغيبونه فى صدع من الارض ثم تدعونه غير مؤسد ولا ممهد قد خلع

الاسباب وفارق الحباب وبشر التراب وواجه الحساب غنيا عما ترك فقيرا  
الى ما قدم وايم الله اني لا قول لكم هذه المقالة وما اعلم عند احد منكم  
من الذنوب اكثر مما عندى فاستغفروا الله لى ولكم وما تبلغنا حاجة يتسع  
لها ما عندنا الا سدناها وما احد منكم الا وردت ان يدي مع يده حتى  
يستوى عيشنا وعيشكم \*

(c) 35

واذا طلبت العلم فاعلم انه \* حمل ثقل فانتخب ما تحمل  
واذا علمت بانه متفاضل \* فاشغل فؤادك بالذي هو افضل  
لو كان هذا العلم يدرك بالمنى \* ما كن ينقي في البرية جاهل  
فاجهد ولا تكسل ولا تك غافلا \* فندامة السعقبي لمن يتكاسل  
اذا انت صاحب الرجال فكن فتي \* كانك مملوك لسكل صديق  
وكن مثل طعم الماء عذبا وباردا \* علي الكبد الحكري لسكل رفيق  
وحدة الانسان خير \* من جليس السوء عذبه  
وجا-يس الخير خير \* من جلوس الممرء وحده

## 2. Translate into Arabic :—

30

Sayyid Jamālu-d-Dīn al-Afghānī was born early in the nineteenth century at Asadābād, near Hamadān, in Persia. Endowed with a keen intelligence, great personal magnetism, and abounding vigour, Jamālu-d-Dīn had a stormy and chequered career. He was a great traveller, knowing intimately not only most of the Moslem world but Western Europe as well. From these travels supplemented by wide reading, he gained a notable fund of information which he employed effectively in his manifold activities. Jamālu-d-Dīn attracted wide attention, and wherever he went in Islam his strong personality started an intellectual ferment.

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## FIRST PAPER.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English, adding explanatory notes where necessary:— 10

ابن سیه چرده که شد زنی عالم دا اوست  
 چشم میگون لب خندان دل خرم دا اوست  
 گرچه شرم دهنان پادشهانند ز لے  
 آن سلیمان زعانت که خاتم با اوست  
 حال عشکیں که در آن عارض مدام گونست  
 سر آن دانه که شد رهزن آدم دا اوست  
 دلبر عزم سفر کرد خدارا سارن  
 چه کدم با دل معجز روح به مرهم با اوست  
 روع خوبست و کمال هنر و دامن پاک  
 لاجرم همت پاکان در عالم دا اوست  
 با که این نکته توان گفت که آن سنگین دل  
 کشت مزار و دم عیسی مریم با اوست  
 حافظ از معتقدانست گرومی دارش  
 زانکه بفشایش بس روح مکرم با اوست

2. Amplify the idea contained in any THREE of the following verses:— 15

(n)

هرگز نمیرد آنکه دلش زنده شد بعشق

ثبوت است بر جریده عالم دوام ما

(b)

حسن ز بصره بلال از حبش مهیب از روم  
ز خاک مکه ابو جهل این چه بر العجبست

(c)

ملی آزادی و کنج قناعت گنجیست  
که به شمشیر میسر نشود سلطانرا

(d)

چون سامری مباحث که زر دید و از خری  
موسوی بهشت و از پی کوساله می رود

3. Either, Discuss the sources of the *Shāhnāmāh* of Firdausī. 12

Or, Describe the special features of the poetry of Hāfiz making apt quotations whenever necessary.

4. Translate into English:—

15

(a)

بیامد یکے مرد گویا ز چین  
که چون او مصر نه بیند زمین  
بر آن چرب دستی رسیده بکام  
یکے پر منش مردمانی بنام  
بصورت گری گفت پیغمبرم  
ز دین آوران جهان بر نزم  
ز چین نزد شاپور شد بارخواست  
به پیغمبری شاه را یارخواست  
سفن گفت مرد کشاده زبان  
جهان دار شد ز آن سفن بد گمان

(b)

بدو گفت کای مرد صورت پرست  
به یزدان چرا آختی چیره دست  
کسی کو بلند آسمان آفرید  
بدو در مکان و زمان آفرید  
کجا نور و ظلمت بدو اندرست  
ز هر گوهی گوهش برتر است

و روز گردان سپهر بلند  
 که زویت پناه است و زو هم گزند  
 برهان صورت چرا بگریزی  
 هچنین هند دین آوران نشنوی

5. Answer any two of the following:—

12

(a) Illustrate the various uses of **معروف** یاء

(b) Write down etymological notes on the following:— \*

آنرین - دهقان - شادمان - ذوالاکتاف - فرهنگ - ایدر - شاهور - مهمان -  
 خانقاه \*

(c) Give the roots and root meanings\* of:—

شماس - رهبان - معبد - دیوان - امانت - مستغنی - موسوس -  
 معراب \*

6. (a) Explain in simple Persian:—

20

چو من دیدم اکنون به سود و زیان  
 دو بغش نهاده شد اندر میان  
 یکی پادشا پاسبان جهان  
 نگهبان گنج و کهن و مهمان  
 اگر شاه باداد و فرخ پی است  
 خرد بیگمان پاسبان و یست  
 خرد پاسبان باشد و نیکی خواه  
 سرش بر گذارد ز ابر سیاه  
 همه چشمتش داد و دانش بود  
 ز دانش روانش برامش بود  
 بدانش ز یزدان شناسد سپاس  
 خنک مرد دانی یزدان شناس

(b) *Either*, Write down a short sketch of the career of **شاهپر** as given in the *Shāhnāmāh* of Firdausī.

8

Or, Describe how Firdausī criticizes the dualistic doctrines of Mani.



7. Explain in simple Persian any two of the following verses:— 8

(a)

در عیش نقد کوش که چون آبغور نماند

آدم بهشت روضه دار السلام را

(b)

یار مردان خدا باش که در نشئی نوح

هست خاکی که بآبی نغرد طوفان را

(c)

به حسن عارض وقد تو برده اند پناه

بهشت و طوبی طوبی لهم و حسن مآب

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

25

ستایش و نیایش عتبه کبریای احدیت جل جلاله و تقدس اسماء بمثابه ایست که اگر جمع نقاط عقول و جداول فهم یا جنود مدرکات و عسا کر علوم فراهم آیند از عهده ادای حرفی از آن کتاب یا هر تویی از آن آفتاب نتوانند برآمد — اگر چه در دیده تحقیق جمیع ذرات مکونات سرچشمه حمد ایزدی اند که از زبان بیز بانی برآمده تشنه لبان و نفسیده زبانان بیدای ناپیدای حمد حقیقی را تر زبان و سیراب دهان دارند - پس همان بهتر که کمند اندیشه از کنگره جلال صمدیت که جانهای پاگان او یخته اوست کوتاه داشته در جلائل نعت و گروه قدسی شکوه حضرت انبیاء و رسل علی نبینا وعلیهم التحية والسلام درآمده اولاً شرائف حالات و ثانیاً نبائل عطیات که جمهور انام را از گریوه ضلالت و غرایب بشاهراه عنایت و هدایت آورده اند بر منابر تبیان ادا نموده و شرح معالی احوال و مکارم اخلاق طائفة مقدسه اهل بیت که رازداران اسرار کبریا و پرده کشایان سرا یر انبیا اند بر آن افزوده از دروه عزت استدعای رحمتی تازه باید کرد \*

2. Either, Give in Persian the allusions contained in:—

12

هو الی انزل السکینه فی قلوب المؤمنین لیزادوا ایمانا مع ایمانهم والله

جنود السموات والارض \*

Or, Write short notes in Persian on the following:—

گروه قدسی - کذکره جلال صمدیت - اهل بیت

3. Explain in Persian any ONE of the following passages:—

(a) و از حضرت مرتضوی که مدینه علم را باب است و باب او طالبان یقین را  
صاحب رضی الله عنه و کرم الله وجهه این معنی منقول است که الله تعالی ملک را  
عقل داد بی شهوت و غضب و حیوان را شهوت و غضب داد بی عقل و انسان را هر  
دو داد - پس اگر انسان شهوت و غضب را مطیع و متقاد عقل گرداند و بکمال عقلی  
برسد رتبه او از ملک اعلی باشد - چه ملک را مزاحمی در کمال نیست بلکه اختیاری  
در آن نه - و انسان با وجود مزاحم طبیعی و اجتهاد باین مرتبه فائز شده - و اگر  
عقل را مغلوب شهوت و غضب سازد خود را از رتبه بهائم فرودتر اندازد - چه ایشان  
بر واسطه فقدان عقل که رازع شهوت و غضب تواند بود در نقصان معذوراند بخلاف  
انسان \*

(b) و از حضرت سید از باب الکمال علیه الصلوات و السلام من الملك المتعال  
سرور است که فرمود - هر کس که در وقت خروج از خانه این دعا بخواند حضرت  
جواد مطلق از خزانه بی نفاق خود در رزق او سعت کرامت فرماید - بسم الله علی  
نفسی و بدنی و مالی اللهم رضی نقضائک و باریک فیما قدرت لی حتی لا احب تعجیل  
ما آخرت و لا تاخیر ما عجالت انی علی کل شیء قدیر - و در ناظر بصیر پوشیده نیست که  
مضمون این دعا طلب عطیه توکل و رضا بمجاری قضاست - چه ارادت خود را بازادست  
حق راست می ناید ساخت و حجب دل را از وسوس و دوائی نفس و هوا بکلی  
پرداخت - تا سبک آلهی و طمانیت نامتناهی در دل فرود آید - آنگاه حوادث در طبق  
ارادت او واقع شود و کائنات بر نهج مشیت او در وجود آید \*

(c) و حکمت بالغه آفریدگار چنان اقتضا کرد که این عالما بیکدیگر پیوسته باشد  
مرادف و متوالی تا در عالم جماد اول چیزیکه گلی بود و ترقی همی کرد و شریف تر  
همی شد تا بهر جان رسید - یعنی بسد که آخرین عالم جمادست تا پیوسته بود با اولین  
چیزی از نبات و اول عالم خار بود و آخر خرما که تشبیه کرده اند بعالم حیوان که این  
نخل خواست تا بار آورد و آن از دشمن بگریزد که تاک از عشقه بگریزد و عشقه گیا  
هیست که چون بر تاک پیچد رزرا بخشکاد - پس در عالم نبات هیچ چیز شریف تر از  
نخل و تاک نبود بجهت آنکه بعالم فوق خود تشبه کردند - و قدم از دایره عالم خود  
بیرون نهند و بجانب اشرف ترقی کردند \*

5. (a) Give the opposite numbers of:—

6

ادوار - صنایع - عقول - معسوس - حواس قوت

(b) Parse the following according to the rules of Persian Grammar:—

12

نباشد آن قدر سرمایه هم جراح مسکین را

که بر زخم دل خود سرنگون سازد نمکدانی

6. Re-write the following in your own Persian, adding explanatory notes where necessary:—

20

ناقلان آثار ملوک نامدار در کتب تواریخ و اخبار آورده اند که سلطان ملک شاه ماضی که در عهد خویش اعظم ملوک نامدار بود و در آن روزگار تمام اختیار ممالک در قبضه اقتدار او - توسن گردون لجام اطاعت احکام او را سر نهاده - و ابلق ایام تازیانه امرونی او را تن در داده - روز بیست و نهم شاه رمضان قصه نیشاپور را مرکز رایات نصرت شعار خود ساخت و خاطر را از اندیشه تردد اسفار پرداخت شامگاه که سلطان خورشید متوجه مملکت مغرب شده خیمه بیضار را بر سر چشمة عین حایه زد - و از کثرت غوغای روز برسم استراحت مبل بذلوت خانه نشیب زمین تحت الارض کرد - یعقوب و ارحمة دیده روزه داران در انتظار عید چون روز سفید گشته بود \*

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

15

(۱) ما را از نزدیک خرمن آتشی گویا دست غیبی بود که بکنار کشید و در بالای بلندی نشانند و خود درویش مثل مجسمه رب النوع نبات در جلو ما ایستاده و بآن اشار خروغوار بزبان بومی چند کلام تکلم کرد چنان مطاعیتی از او دیدم مثل خداوندی که به بنده خویش حکمرانی و فرمان روائی کند چه هر کلامی که از دهان او بیرون می آمد آن جماعت برای اظهار اطاعت سجده کرده زمین خدمت می بوسیدند - عجب - عجب - چه قدرتی از این مرد مشاهده شد - این گدائی بی سر و پا و درویش بی برگ و نوا که سر تا پایش به گل و وسع آلوده و تمام اندامش معروج و در اکثر اعضایش آثار شکستگی و بستگی هریدا بود موی سرش ژولیده ریش و سبیلش به همان حالت طبیعی که روئیده دیگر هیچ وجه اصلاح نگردیده بود \*

(b) شعر تصویر جمال طبیعت است و نقوش ظاهره و صور آشکاری است از حقایق رموز غیر مرئی - شاعر علاوه بر آنچه عموم مردم می فهمند دقایق و لطایف دیگری احساس میکند که مخصوص بآنهاست - از محسوسات و آثار طبیعت خارجی نکات و رموزی را می بیند و ادراک میکند که فهم عموم مردم از درک آنها عاجز است - و آنچه را شاعر میفهمد میتواند با بیان رسای شیرین بدیگران بفهماند - ذوق شاعرانه یکذوق چیزهای دقیق را می بیند که دیگران از مشاهده آن بی نصیب اند - احساسات نازک شاعرانه از مواهب الهیت که باین گروه مخصوص عطا شده - این الهامات بر ذهن شاعر هم در هر وقتی نمیشود و همچنین کلمات و جملهائی که در یک وقت از قلم و زبان شاعری تراوش میکند ممکن است در وقت دیگر و ساعت دیگر از او صادر نشود \*

2. Translate into English either A or B:—

20

A

ای بشکر خواب بسی داده هوش \* خیز که بر خاست ز مرغان خروش  
مرغ سحر زنده و تو مرده \* او ز نوا گرم و تو افسرده  
ترک هوا گوی و نوائی بزن \* چنگ بدامان و نائی بزن  
هر شب از این پرده زنگار گون \* این همه لعبت که سر آمد برون  
هست پی آنکه شود آشکار \* بر نظرت قدرت لعبت نگار  
ننگری این دیر بقا پرده را \* وین همه اوضاع نو آورده را  
بر نکنی سر که درین پرده چیست \* نقش نگارنده درین پرده کیست  
نیل درین صفت خضرا که بیفت \* مهره درین حقه میثا که ریخت  
خرقه شب غالیه گون از چه شد \* دامنش آلوده بغون از چه شد  
سمع سحر لمعه نور از که یافت \* جبهه مه داغ قصور از که یافت

B

باصدادان کآفتاب خاوری سر زد ز بام  
ماه رویم بام را از عکس گیسو کرد شام  
که رخس دیدم بیزر زلف و گفت این دمست  
کآفتاب عالم آرا بر کشد تیغ از نیام  
که پریشان دیدمش زلفین و لغتم این زمان  
چون شب تاریک عالم را فرا گیرد ظلام  
نور صبح و نور رویش بسکه بد باهم قرین  
من ندانستم بتعقیق این کدام است آنکدام

دری او بر قد او چون لاک بر شاخ گل  
 خال او در زلف او چون دانه در زیر دام  
 طارو طرار او در طرف خط مشکبار  
 هارقه طومار یست کز مشکی ختن دارد ختام  
 نام دلها کرده کوئی ثبت در طومار زلف  
 کز سواد زلف مشکین اش جهان شد مشتق فام  
 نی خطا نفتم دلی را کو بزلف اندر کشد  
 زو چو بد خواه شهذشه نی نشان ماند و نه نام  
 الغرض شادان رسد آن ماه و جان از خرمی  
 چون قدح خرازی که نوشد باده در عید صیام  
 گفت ای راوی که شغش آفرینش سر بسر  
 گوش گردد چون صدف هر که مهر ریزی ز کام

3. Translate into Persian:—

50

(a) *A Worshipper of Personality.*

Before I conclude let me tell you what has been the strongest attraction which has brought me to your country, not heeding my physical infirmity and the risks of a difficult journey. In the East we bend our heads before all that is humanly great and not merely before what is mechanically perfect. We hail him as great who conquers circumstances because he has conquered himself. In other words we are worshippers of personality. Even in my own corner of India I seemed to have felt the glamour of the greatness of Persia's present ruler revealing to my mind the vision of a new morning at the verge of the distant skyline. The masterful man, the builder of the destiny of a nation, has at last appeared in our neighbourhood, who has the farsighted mind that knows how to make his own the lessons of the modern age and vigilantly to resist all its adverse forces, who has the heroic wisdom needed in the present crisis in Asia when a whirlwind of greed from an alien sky is cruelly buffeting her from all winds, while she herself lies inert in the darkest gloom of ignorance and superstition.

(b) Upon my arrival there, I posted myself at the bridge over the Zengui, whence I had a full survey of that part of the Sardar's palace which contains his women; and as the troops were crossing it at the same time in constant succession I was unnoticed, and passed for one of the camp followers. The building is situated upon the brink of a precipice of dark rock, at the foot of which flows the Zengui, a clear and rapid stream, foaming through a rocky bed, the stony projections of which form white eddies, and increase the rush of its waters. A bridge of three arches is here thrown over it, and forms part of the high road leading to Georgia and Turkey. The principal saloon of the palace, in a corner of which the Sardar is usually seated, opens with a large casement on the river, and overlooks the rugged scenery.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

25

کدامین نقطه را نطق است انا العقی  
 چه گوئی هرزه بود آن مزیت  
 انا العقی کشف اسرار من مطلق  
 بجز حق کیست تا گوید انا العقی  
 همه ذرات عالم همیچو منصور  
 تو خواهی مست گیر و خواهی مغرور  
 درین تسبیح و تهلیل اند دایم  
 بدین معنی همی باشند قائم  
 اگر خواهی که ب. تو گردد آسان  
 و اَنْ مِنْ شَیْءٍ رَا بَکْرَهٗ نَرُوْا خِرَان  
 چو کردی خویش را پنبه کاری  
 تو هم حلاج را این دم بر آری  
 بر آرز پنبه پندرات از گوش  
 ندای رَاحِدَ الْقَهَّارِ بَنیوَش  
 ندا می آید از حق بر دوامت  
 چرا کشتی تو موقوف قیامت  
 در آ در وادی ایمن که ناله  
 درختی گویدت اِنِّیْ اَنَا اللّٰهُ  
 روا باشد اَنَا اللّٰهُ از درختی  
 چرا نبود روا از نیف بغتی  
 هر آنکس را که اندر دل شکی نیست  
 یقین داند که هستی جز یکی نیست  
 انسانیت بود حق را سزاوار  
 که هر نیکوست و غائب و هم و پندار

جناب حضرت حق را دروئی نیست  
 در آن حضرت من و ما و توئی نیست  
 من و ما و تو را هست یک چیز  
 که در وحدت باشد هیچ تمیز  
 هر آنکو خالی از چو و چرا شد  
 اَنَا الْعَقَّ اَنْدَر و صَدَا شد

2. Explain in detail the expressions:—

8

اَنْتِ اَنَا اللّٰه - رَاحِدِ الْقَهَّار - وَاَنْ مِنْ شَيْءٍ - اَنَا الْعَقَّ

3. Fully explain not more than TEN of the following verses and the allusions contained therein:—

25

(a)

شد گهر اند گهر صفعۀ تیغ سپهر

(b)

شد گره اندر گره حلقۀ درع سعاب

صبح فـنـک پوش ابر زره در قبا

(c)

برده کلاه زرش قند ز شب ز تاب

بال فرو کوفت صرع مرغ طرب گشت دل

(d)

بانگ بر آورد دوس کوس سفر کوفت خواب

صبح بر آمد ز کو چون مه نغشب ز چاه

(e)

ماه بر آمد ز صبح چون دم ماهی ز آب

نیزه کشید آفتاب حلقۀ مه در ربود

(f)

نیزه این ز سرخ حلقۀ آن سیم ناب

شب عربی وار بود بسته نقاب بنفس

(g)

از چه سبب چون عرب نیزه کشید آفتاب

بر کتف آفتاب باز دایمی ز رست

(h)

کرده چو احرامیان بر در کعبه عاب

دم صبح از جگر آرند و نم ژالۀ چشم

(i)

تا دل زنگ پذیر آئینه سیمای بینند

دم و نم تیره کنند این آئنه بین

کز نم گرم و دم سرد عصفا بینند

(j)

آه سهرج زيباب راج مـ بوجي بزنند

(k)

ديرو را ره زند روح چه يازا بينند

بشکنند آن قدح مه تن گردون زيار

(l)

که بدست همه تسبيح ثريا بينند

صبحدم چون کله بندد آه دود آسای من

(m)

چون شفق درخون نشند چشم شب پيمای من

مجلس غم ساخته است و من چو بيد سوخته

(n)

تا بمن راق کند مژگان می پالی من

رنگ بازپچه است کار گنبد نازنج رنگ

(o)

چند جوشم کز بروم نگذرد صفرای من

تیر باران سحر دارم سحر چون نغند

ابن مهن برگ خشن بارانی از غوعای من

4. Give an account of the author of the *Gulshan-i Rāz*. Explain on what occasion the poem is supposed to have been written. Enumerate the editions and translations of the *Gulshan-i Rāz*, pointing out their respective merits and demerits. Give an account of the commentator of the *Gulshan-i Rāz*. 12

5. Write in your own Persian a brief account of the poet Khāqānī and give the names of the imitators of his style, with your comments. 10

6. Translate into Persian :—

20

In the year 506 Khwāja Imām 'Umar Khayyām and Khwāja Muzaffar-i Isfizārī had alighted in the city of Balkh, in the street of the slave-sellers, in the house of Amir Abū Sa'd, and I had joined that assembly. In the midst of that friendly gathering I heard that Proof of the Truth 'Umar say, 'My grave will be in a spot where the trees will shed their blossoms on me twice a year'. This thing seemed to me impossible, though I knew that one such as he would not speak idle words.

When I arrived at Nishāpūr in the year 530, it being then some years since that great man had veiled his countenance in the dust, and this lower world had been bereaved of him, I went to visit his grave on the eve of a certain Friday (seeing that he had the claim of a master on me), taking with me a guide to point out his tomb. So he brought me out to the Hirī Cemetery ; I turned to the left, and his tomb lay at the foot of a garden-wall, over which pear-trees and peach-trees thrust their heads, and on his grave had fallen so many petals that his dust was hidden beneath the flowers. Then I remembered that saying which I had heard from him in the city of Balkh, and I fell to weeping, because on the face of the earth, and in all the regions of the habitable globe, I nowhere saw one like unto him. May God (blessed and exalted is He) have mercy upon him, by His Grace and His Favour !



## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

15

شاعر باید که سلیم الفطرة عظیم الفكرة صمیم الطبع جید الرویه باشد و دقیق النظر که از انواع علوم متنوع باشد و در اطراف مستطرف - زیرا که چنانکه شعر در هر علمی بکار آید هر علمی نیز در شعر بکار می شود - و شاعر باید که در مجلس معاشرت خوشگوی بود و در محفل معاشرت خوش روی - و باید شعرا و آن درجه رسیده باشد که در صحیفه روزگار مسطور بود و بر السنه و افواه مشهور در هر سفاین بنویسد و در مداین بغوانند که حظ او فروق قسم افضل از شعر بقای اسم است و تا مقرر و مسطور نباشد آن را اثر نبود و این معنی از و حاصل نباید و پیش از خداوند خود بهیرد \*

2. Explain the contents of :—

15

مذکور حضرت شاهنشاهی بحکیم هم در واقعه جالینوس الزمان حکیم ابو الفتح

کیلانی برادر \*

3. Comment critically on the literary and diplomatic skill displayed in the letters of Akbar, with a special reference to the dispatch addressed to Shāh 'Abbās of Persia.

10

4. Answer either GROUP A or GROUP B.

## GROUP A

(a) Translate into English:—

20

فلما خلا الملك ذاك اليوم بوزيره اجتمع جماعة الانس في مجلس اهم وكانوا سبعين رجلا من بلدان شتى - فاخذوا يترجمون الظنون - فقال قائل منهم قد رايتم وسمعت ما جرى اليوم بيننا وبين هؤلاء عبيدنا من الكلام والخطاب الطويل - و لم يفصل الحكومه اقتدرون اى شئ رأى الملك فى امرنا - وقالوا لا ندرى ولكن نظن انه قد لحق الملك من ذلك شجر وشغل قلب وانه لا يجلس غدا للحكومة بيننا وبينهم \*

(b) Explain in Persian:—

10

ان الذين يُبَايعونى انما يبَايعون الله - يد الله فوق ايديهم - فمن يبت فانما نكثت

على نفسه - و من اوفى بما عاهد عليه فسيؤتيه اجرا عظيما \*

(c) Translate into Arabic:—

30

This is the place of which we were residents long ago. There is the hill we used to climb! Here is the river in which we used to bathe! This is the spot where we used to stand for prayer!

This is the house of my father. That house is bigger than this house, but the house behind that tree is the largest of all the houses in the village.

#### GROUP B

Write in Persian an essay on ONE of the following subjects:— 60

- (a) Modern Persian and modern English are the two easiest languages of the world. Justify or refute this.
- (b) Sūfīism and Sūfīistic literature.
- (c) Akbar - the man and the king.
- (d) Khāqānī and imitators of his style.

#### SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

##### A. MUSLIM HISTORY

*Answer any THREE questions.*

30

1. Give an account of the conquest of Sind by Muḥammad bin Qāsim, together with some description of the earlier attempts and their results.
2. Sketch the career of Nādir Shāh, dwelling particularly on his invasion of India and its consequences.
3. Narrate the events and circumstances which enabled Persia to regain independence after her conquest by the Arabs.
4. Describe the destruction of Baghdād and the 'Abbāsīd Caliphate by Hulāgū and the lessons to be learnt therefrom.

##### B. HISTORY OF PERSIAN LITERATURE

*Answer any THREE questions.*

40

1. Write all you know about the Avesta, the Zoroastrian sacred book.
2. Write historical and descriptive notes on any FIVE of the following:—

(a) *Siyāsatnāma*, (b) Rūdakī, (c) *Lutāb-ul-Albāb*, (d) Šāib, (e) *Durra-i-Nādirā*, and (f) Shaikh 'Alī Ḥazīn.

3. Name in chronological order and describe FOUR of the earliest prose works in Persian known to you.

4. Compare Khāqānī and Anwarī as qaṣīda writers, pointing out the characteristic features of the qaṣīdas of each.

### C. RHETORIC AND PROSODY

Attempt any THREE questions.

30

1. Differentiate between استعاره - استعاره and تشبیه - مجاز and حقیقت and کنایه .

2. Define, with examples, any FIVE of the following:—

حسن تعلیل - قصیده - مثنوی - قافیه - بحر - عروض - تزیین الصفات

3. Scan the following and name the metre:—

(a)

مذکمه باشم عقل کل را ناوک انداز ادب

(b)

مرغ اوصاف تو از اوج بیان انداخته  
به معشر حرف بی صوت است فریاد شهیدانش  
نمی دانم که داد این سرمه چشم نیم خوابش را

4. Name and explain the figures of speech in any TWO of the following:—

(a)

ساقی بده رطل گران ز آن می که دهقان پرورد

انده برد غم بشکند شادی دهد جان پرورد

(b) وقت آن است کز آن کز اثر عیش و نشاط

می نه گنجد به صراحی و صراحی به بغل

(c) از نسیم آرزو میگرددا گل گلزار ما

بر نه می نابد دم عیسی دل بیمار ما

## PASS

Examiners— { MAULVI A. F. M. ABDUL KADIR, M.A.  
 ,, SYED MOZAFFARUDDIN AHMAD, M.A.  
 ,, M. MAHFUZ-UL HAQ, M.A. .

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Translate into English:—

12

بر آن آفرین کافریں آفرید \* مکان و زمان و زمین آفرید  
 هم آرام از دست هم کام ازوی \* هم انجام از دست و فرجام ازوی  
 شهر و زمین و زمان کرده است \* کم و بیش گیتی بر آورده است  
 ز خاشاک ناچیز تا عرش راست \* سراسر بهستی یزدان گواست  
 جز اورا مغفول کردگار جهان \* شداسننده آشکار و نهان  
 وزو بر روان محمد درود \* بیارانش بر هر یکی بر فزود  
 همه پاک بودند و پرهیزگار \* سغهای شان بر گذشت از شمار

(b) Comment on the word فرجام and say whether it is simple or compound. 2

(c) Comment on the construction of جهان آفرین and give examples. 3

2. Give in your own Persian an account of:—

10

*Either, بادشاهی اردشیر or, اندرز اورمزد به بهرام*

3. (a) Translate into English:—

13

ما سرخوشان مست دل از دست داده ایم  
 هزار عشق و هم نفس جام و داده ایم  
 بر ما بسے کمان ملامت کشیده اند  
 تا کار خود ز آبروی جانان کشاده ایم  
 ای گل تو دوهی جام صبوحی کشیده  
 ما آن شقایقیم که با داغ زاده ایم  
 غن ز توبه، ما گرمبول شد  
 گو باده صاف کن که بعدر ایستاده ایم  
 کار از ترمی رود مددے ای دلیل راه  
 کانصاف می دهیم که از ره فتاده ایم

- چون لاله می عبین و قدح درمیان کار  
 این داع بین که بر دل خونین نهاده ایم  
 گفتی که حافظ این همه رنگ خیال چیدست  
 نقشه غلط عنوان که همان لوح ساده ایم
- (b) Distinguish between ساده لوح and لوح ساده 3
- (c) Write a note on پیر معانی 4
4. Explain any THREE of the following:— 12

(a)

دریای اخضر فلکی و کشتی هلال  
 هستند غرق نعمت حاجی قوام ما

(b)

تا ز وصف رخ زیبای تو ما دم زده ایم  
 ورق گل خجل است از ورق دفتر ما

(c)

صاحب دیوان ما گوئی نمی داند حساب  
 باندیرین طغرا نشان جسته الله نیست

(d)

خود از پرتو شعشعۀ ذاتم کردد  
 باده از جام تجلی به صفاتم کردند

5. Either, Give a short account of the life of Hāfiz. 15  
 Or, Discuss the sources of the *Shah-nāma*.
6. Explain in simple Persian either A or B:— 10

A

ستاره شمر لغت کاه شهریار \* کس از گردش چرخ ناپایدار  
 بمردی و دانش نیابد گذر \* خرده‌مند یا مرد پرخاشگر  
 به باشد همه بردنی بی گمان \* نتابیم با گردش آسمان  
 چنین داد پاسخ گرانمایه شاد \* که دادار باشد ز هر بد پناه  
 که گردان بلند آسمان آفرید \* توانائی و ناتوان آفرید

## B

اگرست سلطنت فقر به بخشند اے دل  
 کمترین ملک تو از ماه بود تا ماهی  
 قطع این مرحله بے همراهی خضر مکن  
 ظلماتست به ترس از خطر گمراهی  
 تو در فقر ندانی زدن از دست مده  
 مسند خواجگی و مجلس توران شاهی  
 آے سکندر بنشین و غم بے هو ده منخور  
 که نه بخشند ترا آب حیات از شاهی

7. (a) Analyse the following line according to Persian grammar:— 8

نگار من که بمکتب نه رفت و خط نه نوشت  
 بـغـمـه مسـئـله آموز صد مدرس شد

(b) Give the various significations of چه in Persian with examples. 8

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English:—

10

دیگری گفت - من مرد بازارگانم - و کار من آنست که به تر و خشک سفر میکردم -  
 و اندک سرمایه دارم - و متاعی که به شهری بفرم بدیگر شهر برم و بفروشم - به اندکی  
 سود قناعت کنم - مگر عقدی مروارید داشتم - چو بدین شر آمدم در بها کردم - خبر  
 بوزیر ملک شد - کس فرستاد و مرا بغوا اند - و آن رشته مروارید از من خریداری  
 کرد - بی آنکه بها دهد بخزانة خویش فرستاد - چند روز بسلام او همی رفتم - خود  
 در آن راه نشد که مرا بهای عقد مروارید باید داد - و نه عقدار باز داد - طاقتم نماند -  
 و بر سر راه بودم - روزی پیش وی شدم - گفتم - اگر آن عقد شایسته است بفرومائی تا  
 بها بدهند - و اگر شایسته نیست باز دهند \*

2. Write etymological and grammatical notes on any FIVE of the following words:— 5

بازارگان - تر و خشک - اندک - کدخدائی - بد گوهری - آفتاب - سالار

8. Mention some of the striking features in which the style of *Mas'ūliku'l-Muhsinīn* differs from that of the *Siyāsatnāma*. 10

4. Translate into English:—

15

درین بین از مبارزان مرد قصیر القامة - که قدش به کو فتن چماق بزرگ بر سر حریف بلند بالای خود نارسا بود - به سکوی مغازه بلور فروش برجست - صاحب مغازه خواست پائینش اندازد - چماق را بلند کرد بزد - خورد به چهل چراغ آویزان بزرگ و شکست - هر شکسته بدیگری و دومی بسومی میخورد - پاره بلورهای شکسته مثل تگرگ بسایر اسباب میافزاد و می شکست - در یک لمحۀ آن همه اسباب وحد افزای قیدتی بیک تل شکسته بی معرف مبدل شد - صاحب مغازه چون میانین گردبان خود را چاک زده بر سر و سینۀ خود میخوفت - فریاد میکرد - به تظلم خود استمداد می نمود - کسی بدادش نمی رسید \*

5. Give the Persian equivalents of the Arabic words underlined in the extract in Question 4 above. 5

6. Either, Give the sense in which the word تظلم is used by the author of *Mas'ūliku'l-Muhsinīn* and quote the first argument by which he tries to prove the absurdity of تظلم 6

Or, Point out the anachronisms and historical inaccuracies which you may have noted in the narrative of the dreams of کامبیز

7. Give in your own Persian the substance of what is said in روح اول about the creation of the world and the solar system. 15

8. Re-write the following passage in your own simple Persian:— 14

احمد چون در فرانسه تحصیل کرده - قدمت تربیت و نشر معارف و کثرت ثروت و ترفیع صنایع و اداره جمهوریت فرانسرا می ستود - و فتوحات ناپلیون اول را شاهد می آورد - دیگری فرانسه هارا به سبک مغزی و لامذهبی و بی عقلی تشنیع میکرد - و از ملت ایتالیا و رشادت و غیرت و کفایت و شرف آنها توصیف می نمود - و قدمت مدنیت رومیان را در وضع قوانین و تاسیس مشورتخانه تفصیل نقل میکرد - \*

9. Either, Scan any two of the following:—

20

(a)

من از آن حسن روز افزون که یوسف داشت دانستم  
که عشق از پرده عصمت برون آرد زلیخارا

(b)

تا ز میخانه و می نام و نشان خواهد بود  
سر ما خ ره پیر معان خواهد بود

(c)

قدسی ندانم چون شود سودای بازار جزا  
او یقعد آمرزش بکف من جنس عصیان در بغل

Or,

(a) Mention the صنعت (figure of speech) used in the following couplets :—

(۱)

ساقیا خیز که کل رشک رخ حورا شد  
بوستان جنت و می کوثر و طوبی است چنار

(۲)

دیده روشن می شود از صورت زیبای تو  
ورکسی انکار این معنی کند روشن کنم

(۳)

مرا فراق تو روزء هزار باز کشد  
فراق چون تو گله این چنین هزار کشد

(b) Differentiate between استعاره (metaphor) and تشبیه (simile), illustrating your answers fully.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

۸

15

بعد از یک ساعت شوهرم باکمال پردشانی و اضطراب و رنگ رخسار پریده وارد سفره خانه شده روی صندلی خود قرار گرفت ما همه ساکت شدیم که شاید از او حرفی بشنویم. هیچ نگفت و پنجم بمن اشاره کرد که حضرات را از سفره خانه باطاق دیگر ببرید - من چون خیلی مشوش بودم این اشاره خفیه او را نفهمیده بلنه واله تر از اول، بر روی صندلی خود نشستم مهمانان از زن و مرد متابعت مرا کرده و طوری سکوت درین محل غلبه داشت. که اگر یک مگسی می پرید مدای بال او بگوش میرسید شوهرم که اصرار ما را در توقف



دید به دو سه نفر نوکر هندی که مشغول خدمت بودند اشاره کرد بیرون رفتند من تاب نیاورده از جای خود برخاسته نزدیک صندلی او رفتم و بازوی او را گرفته گفتم چه خبر است - آیا خبر ور شکستگی یکی از شرکی خود را که مقیم لندن یا کلکته هستند اصفا نموده یا نهود بالله حادثه دیگرست \*

B

15

قبلاً بطور اختصار ذکر نمودیم که در اولین وحله مسئله تنظیم امور قشونی خاطر معمد علی پاشا را بغود متوجه ساخت و فهمیده بود که اگر آن موضوع اصلی را تعقیب نکند بزمام داری امور نرسیده بانجام مراد دستور خود موفق نخواهد شد - فکر اصلاح قشون از ابتدای زندگانی سیاستش شروع شده و تا آخر ایامش آن قضیه را تعقیب نمود - در حقیقت تمام پیشرفتهای معمد علی پاشا در مصر نتیجه داشتن نظام مرتب منظم و بطرز جدید بوده است و الا فتح عربستان و سودان و دفع سرکشان و باغیان مملکت بآن آسانی صورت نمی بست \*

2. Translate into English either A or B:—

20

A

20a

یوسف کذاں چو به مصر آمد \* صیت وی از مصر بکعبان رسید  
بود در آن غمگده یک دوستش \* پز شده مغز و فایا دوستش  
ره بسوی مصر جمالش سپرد \* آینه سهر ره آورد برد  
یوسف از او کرد نهانی سؤال \* کای شده معمرم به حرم وصال  
در طلبم رنج سفر برده \* زین سفرم تعفه چه آورده  
گفت بهر سو نظر انداختم \* هیچ متاعی چو تو نشانختم  
آینه سهر تو کردم بدست \* پاک زهر گونه غباری که هست  
تا چو بآن دیده خود را کنی \* طلعت زینبات تماشا کنی

B

به بین تا یک انگشت از چند بند \* باقلیدس صنع در هم فگند  
پس آشفتنکی باشد و ابلهی \* که انگشت بر حرف صنعتش نهی  
تأمل کن از بهر رفتار مرد \* که چذد استخوان پی ز دو وصل کرد  
که بی گردش کعب و زانو و پای \* نشاید قدم بر گرفتن ز جای  
از آن سجده بر آدمی سخت نیست \* که در صلب او مهره یک لغت نیست  
بصر در سر و فکر و رای و تمیز \* جوارح بدل دل بدانش عزیز  
بهائم بر روی اندر افتاده خوار \* تو همپون الف هر قدمها سوار  
نزیبد ترا با چنین سروری \* که سر جز بطاعت فرو آوری

## 3. Translate into Persian :—

50.

(a) My ill luck would have it that the doctor was detained longer than usual in his attendance upon the Shah; and as the servants dined after him, and ate his leavings, it was late before I was at liberty. When that moment arrived I was in a fever of expectation; the last glimmering of day tinged the western sky a light shade of red, and the moon was just rising, when I appeared on the terrace with my bed under my arm. I threw it down and unfolded it in haste, and then, with a beating heart, flew to the broken wall. I looked over it with great precaution; but, to my utter disappointment, I saw nothing. I looked all around, but saw no Zainab. I coughed once or twice; no answer. The only sound which reached my ears was the voice of the doctor's wife exerting itself upon some one within the house; although its shrillness pierced even the walls, yet I could not make out what was the cause of its being so excited, until of a sudden it burst into the open air with increasing violence.

(b) The news of this great army having reached the Saracens whilst they were at Hims, filled them full of apprehensions, and put them to a very great strait as to the best course to pursue in this critical juncture. Some of them would very willingly have shrunk back, and returned to Arabia.

## BENGALI (CLASSICAL)—PASS

<i>Paper-setters—</i>	{ PROF. SUNTIKUMAR CHATTERJI, M.A., D.LITT. DR. SURENDRANATH DASGUPTA, M.A., PH.D. PROF. KHAGENDRANATH MITRA, RAJ BAHADUR, M.A.
<i>Examiners—</i>	{ DR. TAMONASHCHANDRA DASGUPTA, M.A., PH.D. MR. BASANTARANJAN RAY, VIDYADHARARH. „ KSHITIMOHAN SEN SASTRI.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Write your answers in Bengali, IN EITHER pure সাধু ভাষা OR pure চলিত ভাষা avoiding a mixture of the two forms in the same answer.*

## DRAMA TEXTS : 75 marks.

1. *Either*, 'Girish Chandra's genius as a dramatist shines out in spite of the religious and medieval atmosphere of his *Paurāṇik* dramas—the atmosphere which we find in the *ṛātrās*.' Discuss, with special reference to *Janā*. 15

*Or*, Give a critical appreciation of the type of drama to which *Janā* belongs, comparing and contrasting it with other types of the drama, ancient, medieval, and modern, with which you may be familiar.

2. *Either*, Give a sketch of the character of *either Prabir or Kṛishṇa* as in Girish Chandra's *Janā*. 15

*Or*, Write a short essay on Girish Chandra Ghosh as a poet, with an appraisal of his merits as a lyric writer and as a contributor to Bengali versification.

3. *Either*, Give a sketch of the character of ONE of the following persons from the *Tapatī* of Ranbindranath : *Sumitrā*, *Vipāsā*, *Devadattā*.

*Or*, Discuss the main idea of the drama *Tapatī*.

*Or*, Institute a comparison between *Janū* and *Tapatī* as dramas.

4. (a) Explain FOUR of the following passages (TWO from each group) with FULL reference to the context, discussion of its dramatic appropriateness, and elucidation of all difficult points, allusions, etc :—

24

#### GROUP A

- (i) শক্তি নাহি ধরে ষড়ানন  
বিমুখিতে মাতৃভক্ত যোধে,.....  
ত্রিঘমাণ ভরে মম চক্রে আসে ফিরে,  
পাছে ভয় হয় !
- (ii) এক জন্ম তো ধোঁপার বোঝা ব'য়ে ঘাস খেয়ে আত্মক ।
- (iii) চক্ৰী হরি পাণ্ডব-সহায়—  
হলে পাছে হ'রে ল'য়ে যায়,  
সতর্ক করিও, সতি ! পতিরে তোমার ।
- (iv) উচ্চাসনে বসিয়াছে রাজা যুধিষ্ঠির,  
পদ-প্রান্তে ব'সো গিয়ে তার !  
হ'ত ভাল, পারিতে যতপি  
আমারে লইয়ে যেতে দ্রৌপদী-সেবায় ।

#### GROUP B

- (v) আমার মীনকেতু অশাস্ত্রীয় .... রুদ্র-ভৈরবের সঙ্গেই তাঁর অন্তরের মিল—পিণাক ছদ্মবেশ ধ'রেচে তাঁর পুষ্পধহুতে ।
- (vi) দুর্শ্বখ, প্রজারঞ্জে আরেকবার সীতার নির্কাসন চাই না কি ?
- (vii) অগ্নি যাহা গ্রহণ করেন তাতে মলিনতা থাকে না—রাজার কর সেই অগ্নি ।
- (viii) আমি সেটাকে ঋতির দ্বারা গ্রহণ ক'রে স্মৃতির দ্বারা ব্যক্ত ক'রবো ।
- (ix) এই হারানোর কী অপূর্ণ মহিমা ! সূর্যাস্ত-রশ্মির পশ্চিম যাত্রা !
- (x) অধর্ম যদি সাহস দিতে পারে, ধর্ম কি ভীত হবে ?

(b) Write full explanatory notes on SIX of the following words :— 6

ছটাক ; অতম্ব ; সপ্তক ; উদয়-শৃঙ্গ ; ভণিতা ; মহাজন ; বাংলানো ;  
বাঁকা-ঠাকুর ; এক-গাড় ; প্রতিবিধিসিতে ; মাতব্বর ; বোনেদী ; কোটাল ;  
পাওদল ; চাঁদনি ; কলুতরু ; ঝিয়ারী ; বাহু ; আলাই-বালাই ; ননদিনী ;  
চিন্তামণি ; বৈরথ-সমর ; নিরিবিলি ; বিমলিনী ; যুক্তি না জুয়ায় মম ।

RHETORIC AND GRAMMAR : 25 marks.

5. *Either*, What do you understand by the term রস ? Enumerate the various রস's as noted by the Ancient Indian Rhetoricians, and briefly explain their character. 10

Or, Explain FIVE of the following :—

মহাকাব্য ; পুরাণ ; নান্দী ; ওজোগুণ ; মাত্রাবৃত্ত ছন্দ ; পয়ার ; রূপক ;  
অতিশয়োক্তি ; অপহুতি ; সমাসোক্তি ; সার ; অহুগ্রাস ; উপমা ; উৎপ্রেক্ষা ;  
ব্যাঙ্গত্বতি.

6. Answer any TWO of the following questions :—  $7\frac{1}{2} + 7\frac{1}{2} = 15$

(a) Discuss historically the pronunciation of ব and ব-কল, and ব and ব-কল in Bengali.

(b) Mention some of the special phonetic habits of Modern Bengali ( Standard Colloquial, চলিত ভাষা ).

(c) *Either*, Give the rules of EITHER গড়-বিধান OR বড় বিধান.

Or, Comment on SIX of the following spellings :—

কোরণ, সোণা, শুনে, জিনিষ, সেকপীর, বাণান, সরম, আপোষ, নিষুতি,  
চসমা, খুটে, দূরবীণ ।

(d) Write a short note on the *tense-system* of the Bengali verb, comparing it with that of the verb in English.

(e) Give, with examples, some of the more important *native Bengali* ( i. e. not Sanskrit or foreign ) কৃৎ suffixes and their function.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

১. (আমার) বাহির ছয়ারে কবাট লেগেছে

ভিতর ছয়ার খোলা ।

(তোরা) নিসাড়া হইয়া আয় লো সজনি

আধার পেরিয়া আলা ॥

আলার ভিতরে কালাটি আছে

চৌকি রয়েছে তথা ।

সে দেশের কথা এ দেশে कहিলে

লাগিবে মরমে ব্যথা ॥

(তোরা) পর(ন) পতিসনে সদাই গোপনে

সতত করিবি লেহা ।

নীর না ছুইবি সিনান করিবি

ভাবিনী ভাবের দেহা ॥

তোরা না হইবি সতী না হবি অসতী

থাকিবি লোকের মাঝে ।

চণ্ডীদাস কহে এমনি হইলে

তবে ত পিরীতি সাজে ॥

*Either, Explain clearly the idea of love contained in the above poem.*

*Or, Describe clearly in Bengali the Vaishnava view-point regarding human and divine love as manifested in the poems of Vaishnava poets, with apt quotations in support of your answer.* 15

2. Give a full account in Bengali of the conversation between Vyāsa and Gangā, following closely all the details of the points of persuasion and its failure. 10

3. *Either, Delineate in Bengali the character of Śrīmanta with apt references to the episodes of his life in support of your view.* 15

*Or, Describe clearly the social, religious and intellectual conditions which form the setting of the poem Kavikankanchandī.* 15

4. Explain in clear chaste Bengali, with reference to the context, any TWO of the following passages, appending suitable annotations :— 10

(a) পহিলহি রাগ নয়ন-ভঙ্গ ভেল ।

অহুদিন বাঢ়ল অবধি না গেল ॥

না সৌ রমণ না হাম রমণী ।  
ছহঁ মন মনোভাব পেশল জানি ॥

- (b) চন্দন-তরু যব সৌরভ ছোড়ব  
শশধর বরিথব আগি ।  
চিন্তামণি যব নিজগুণ ছোড়ব  
কি মোর-করম অভাগি ॥  
জীবণ মাহঘন বিন্দু না বরিথব  
অকৃতক বাবা কি ছন্দে ।  
গিরিধর সেবি ঠাম নাহি পাওব  
বিগ্ধাপতি রহ ধন্দে ॥

- (c) এত বলি একমুখ দ্বিভূজ হইলা ।  
সাক্ষী করি একমুখ রুদ্রাক্ষে রাখিলা ॥  
হাসিয়া কহেন দেবা হইলা সমান ।  
হর-গৌরা এক হই ইথে নাহি খান ॥

- (d) লাজ খায়্যা কহি আমি আপন মরম ।  
ভুমি কি না জান পতিব্রতার ধরম ॥  
সতী মানে পতি নারায়ণ সমতুল ।  
পরের পুরুষ যেন সিমুলের ফুল ॥

5. Give a critical estimate of *Brajangana* as a love poem in Bengali. In what way do the poems of this collection differ from the love poems of Rabindranath and of the Vaishnava writers ? 15

6. Explain clearly in Bengali the central idea of *জীবন দেবতা* of Rabindranath and discuss the extent to which it explains the general view-point of Rabindranath's reflective poems. 15

7. Either, Explain clearly in Bengali the central idea of Rabindranath's *মেঘদূত* in মানসী. 10

Or, Discuss the central idea of Rabindranath's *সাধনা*. 10

8. (a) তবে যে সিন্দূরবিন্দু দেখিছ ললাটে,  
সধবা বলিয়া আমি রেখেছি ইহারে !  
কিন্তু অগ্নিশিখাসম, হে সখী সীমন্তে মম  
ছিলিছে এ রেখা আজি—কহিছ তোমারে—  
গোপিলে এ সব কথা প্রাণ যেন ফাটে ।

(b) আজি এ প্রভাতে রবির কর  
কেমনে পশিল প্রাণের পর  
কেমনে পশিল গুহার আধারে  
প্রভাত পাখীর গান  
না জানি কেনরে এতদিন পরে  
জাগিয়া উঠিল প্রাণ ।

(c) নদীর মত এসেছিলে গিরিশিখর হ'তে  
নদীর মত সাগরপানে চলো অবাধ স্রোতে ।  
একটা গৃহে পড়ছে লেখা সেই প্রবাহের গভীর রেখা  
দীপ্ত শিরে পুণ্যশীতল তীর্থ সলিল ঝরে ॥

Explain with reference to the context any TWO of the above passages. 10

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Describe briefly the place of Tekchand Thakoor in the history of the prose literature of Bengal. 11

*Or*, Bankim Chandra Chatterjee thinks that Tekchand's *Ālāler Gharer Dulāl* and Tarasankar's *Kādambari* mark two opposite poles of Bengali prose literature in the matter of style. Criticise this opinion. 14

2. How does Bankim Chandra himself stand in relation to Tekchand Thakoor and Tarasankar in the matter of style? Illustrate your answer by reference to the style of *Kapāl Kundalā*. 10

3. *Either*, Give in your own words Rabindra Nath Tagore's estimate of Kālidās as a poet. 14

*Or*, Reproduce briefly Rabindranath's appreciation of *Kādambari*. 14

4. *Either*, Delineate the character of Thakchacha in *Ālāler Gharer Dulāl*. 10

*Or*, Bring out the principal traits of Lutfunnisa's character in *Kapāl Kundalā*. 10

5. Describe the character which impresses you most in Sarat Chandra Chatterjee's *Dattā*. 12

6. Explain fully with reference to the context :— 20

(a) *Either*, অল্প কতকগুলি ফতো বড় মাহুষ আছে—তাহাদের

উপরে চাকণ-চিকণ, ভিতরে খ্যাড়। বাহিরে কৌচার পন্তন, ঘরে ছুঁচোর কেতন—আয় দেখে ব্যয় করিতে হইলেই যমে ধরে।

*Or*, ঠকচাচারও ভয় হইয়াছে, কিন্তু তিনি পুরাণু পাণী—মুখে বড় দড়—বলিলেন, ‘ডর কেন কর, বাবু? না ভুখি হইলে মূই তোমাকে কাঁধে ক’রে সেতরে লিয়ে যাব—আফদ তো মরদের হয়’।

(b) *Either*, দিনের বেলায় দিনকরের ভয়ে গিরিগুহার অভ্যন্তরে লুকাইয়া ছিল, এই সময় সময় পাইয়া অন্ধকার তথা হইতে সহসা বহির্গত হইল।

*Or*, নগরস্থ সমস্ত বাটীর দ্বার উদ্ঘাটিত হওয়াতে বোধ হইল যেন, নগরী চন্দ্রাপীড়কে দেখিবার নিমিত্ত একেবারে সহস্র সহস্র নেত্র উন্মীলন করিল।

(c) *Either*, যদি কখনও এমন প্রচণ্ড বায়ুবহন সম্ভব হয় যে, তাহার বেগে নক্ষত্রমালা সহস্রে সহস্রে স্থানচ্যুত হইয়া নীলাশ্বরে আন্দোলিত হইতে থাকে, তবেই সে সাগরতরঙ্গ ক্ষেপের স্বরূপ দৃষ্ট হইতে পারে।

*Or*, কপালকুণ্ডলা অন্তঃকরণ সম্বন্ধে তান্ত্রিকের সম্ভান; তান্ত্রিক যেরূপ কালিকাপ্রসাদাকাজ্জায় পরপ্রাণ সংহারে সঙ্কোচশূন্য, কপালকুণ্ডলা সেই আকাজ্জায় আত্মজীবন-বিসর্জনে তদ্রূপ।

(d) *Either*, রামগিরি হইতে হিমালয় পর্য্যন্ত প্রাচীন ভারতবর্ষের যে দীর্ঘ এক খণ্ডের মধ্য দিয়া মেঘদূতের মন্দাকিনী ছন্দে জীবন-শ্রোত প্রবাহিত হইয়া গিয়াছে, সেখান হইতে কেবল বর্ষাকাল নহে, চিরকালের মতো আমরা নির্বাসিত হইয়াছি।

*Or*, কালিদাসের কাব্য ঠিক শ্রোতের মতো সর্বাঙ্গ দিয়া চলে না— তাহার প্রত্যেক শ্লোক আপনাতে আপনি সমাপ্ত—একবার খামিয়া দাঁড়াইয়া সেই শ্লোকটিকে আয়ত্ত করিয়া লইয়া তবে পরের শ্লোকে হস্তক্ষেপ করিতে হয়।

7. Translate into Bengali EITHER of the following extracts:— 20

(a) If India itself be the book of Indian history, it follows that travel is the true means of reading that history. The truth of this statement, especially while the published renderings of our history remain so inadequate and so distorted, ought never to be forgotten. Travel as a mode of study is of infinite importance. Yet it is not everything. It is quite possible to travel the world over and see nothing or only what is not true. We see, after all, only what we are prepared to see. But in history, we want to be able to see, not the thing that would be pleasant, but the thing that is true. For this we have to go through a strenuous preparation.



(b) The Indian youth should be taught not so much what to think, as how to think. They should be encouraged to think for themselves and form their own judgments. For democracy to be a success requires not only a free people, but a thinking people. Education so-called is not enough. Did not the educated classes in England support Charles I against his Parliament, did they not uphold slavery in the West Indies and favour slave states in the American Civil War? If Indians are to avoid such capital errors, they must learn in their schools and universities to think clearly.

## URDŪ (CLASSICAL)—PASS

*Paper-setters*— { MOULVI M. MAHFUZ-UL-HAQ, M.A.  
MAULVI NASIR ALI KHAN CHAUDHURI, M.A.

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MAULVI SYED NASIR ALI KHAN CHAUDHURI, M.A.

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

#### A. DRAMA

1. Describe and discuss the character of گلفام as given by Amānat in the *Indar Sabhā*. 1

2. *Either*, Who was the author of *Indar Sabhā*? What do you know of his life and writings? Trace the influence of the 'Lucknow school' of poetry on the style of *Indar Sabhā*. 15

*Or*, Assign the place of *Indar Sabhā* in Urdū drama.

3. Explain fully any *three* of the following :—

24

(a)

بیداد مجھے یاد ہے رٹا تمہاری

یوسف کی قسم اب نہ کروں چاہ تمہاری

بت بن گئے محفل میں رقیبوں سے نہ بولے

کیا بات ہے خالق کی قسم راہ تمہارے

(b)

تم رہ خوش قد ہو روش پر جو ذرا تن کے چلو  
 سر اُٹھائے نہ چمن میں کوئی شمشاد کبھی  
 لیلیٰ زلف کا شیدا لب شیریں کی ہے چاہ  
 کبھی مجنوں ہوں ترے عشق میں فرہاد کبھی

(c)

چہپاؤں مٹہہ ندامت سے لحد میں کیوں نہ میں وحشی  
 کفن نے داغ عربانی کے جامہ میں لگایا ہے  
 عیان سیندور کا ٹیکا نہیں محراب ابر میں  
 چراغ اس شمع روئے عین کعبہ میں جلایا ہے

(d)

باؤلی ہوں بحر الفت میں زلیخا کی طرح  
 یوسف گم گشتہ کا چاہِ ذوق ملتا نہیں  
 زندگی سے تنگ ہوں بے یار باغِ دھرم میں  
 بیکلی ہے دل کو وہ غنچہ دھن ملتا نہیں

4. Give a brief résumé of the story of *Indar Sabhā*.

15

5. Explain the following :—

6

چٹو کو کسم پہوں لاگی سرسوں \* پھینکت چلی گیہوں کی بار  
 ہر کے دوارے مالی کا چہورا \* گروا قارت گیندن کی ہار

## B. RHETORIC AND GRAMMAR

6. Explain any THREE of the following 'figures of speech', giving examples in each case :—

9

تسامیح - مشاکلہ - ایہام - تضاد - حسن تعلیل

7. Name and explain the 'figures of speech' in any TWO of the following verses :—

8

(a)

ہزار افسوس اے غنچہ کہ تیرے \* دھن پایا لب گویا نہ پایا

(b)

ہاتھ آ جو گئی عصا کی ناٹھیر \* پیراں ہوا صورتِ صافیر

(c)

ہمیں اسی کی ہے شرم واعظ \* اسی سے کعبہ نہ جائینگے ہم  
کہ عمر بھر کی ہے بت پرستی \* خدا کو کیا منہ دیکھائینگے ہم

8. Explain any TWO of the following :—

8.

مذکورہ مرثیہ سماعی - جملہ انشائیہ - مرکب غیر مفید

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain with reference to the context :—

17

مسیح اُسکے خزانہ کا پارہ درز \* تجلی طور اُسکی مشعل فروز  
خلیل اُسکے گلزار کا باغبان \* سلیمان سے کئی مہرہ دار اُسکے وار  
خضر اُسکی سرکار کا ابدار \* زہر ساز داؤد سے وار ہزار

2. Put the following verses into simple prose, explaining allusions if any :—

20

گر ہوا ہے طالبِ آزادگی

ت سبکدہ و زنا کا

مسنَدِ گل منزلِ شبنم ہوئی

دیکھ رہا ہے دیدہ بیدار کا

اے راسی ہونا سورج پر نثار

مدعا ہے چشم گورہر بار کا

مدعاے عاشقان ہو آن میں دیدار یار

یار کے دیدار بن دو جا عبت ہے مدعا

میں غم سوں کل سراپا جون مہو ہوں لیکن

مجھ ناتواں کی جانب رہ موکمر نہ آیا

پسینا پسینا ہوا سب بس

کھجور شبنم آلودہ ہو یا سمن

گہری دوتلیک وہ مہ ۱ زو  
 رہے شرم سے پائے بندِ حجاب  
 گئے دن خمران کے اور اُنی بہار  
 مئے لالہ گون سے دیکھا لالہ زار  
 گلابی جھمکتی پالا دے مجھے  
 سمان کوئی ایسا دکھا دے مجھے  
 کہ وہ ماہِ نخبِ کرائس سے نکل  
 منارل سو اپنے بھرے بر محل

3. Either, Comment on Mir Hasan's *Mathnawi*, with reference to its style, diction, and plot. 15

Or, Write a note on Wali as a ghazal-writer. 15

4. Annotate the following :— 15

ہے مجھکو تجھ سے نذرۂ غیر کا گلہ  
 ہر چند ہر سبیل شکایت ہی لیوں نہ ہو  
 پیدا ہوئی ہے کہتے ہیں ہر درد کی دوا  
 یوں ہو چارۂ غم الفت ہی کیوں نہ ہو  
 وفاداری بشرطِ استواری اصلِ ایمان ہے  
 مرے بتخانہ میں تو کعبہ میں گزر برہمن کو  
 جب میکہ چھتا تو پھر اب کیا جگہ کی قید  
 مسجد ہو مدرسہ ہو کوئی خانقاہ ہو  
 بے در و دیوار سا اک گھر بنایا چاہئے  
 کوئی ہمسایہ نہ ہو اور پاسبان کوئی نہ ہو

5. Paraphrase the following with reference to the context :—

20

مہی بگڑی ہوئی تقدیر کو روتی ہے گویائی  
 میں حرفِ زیر لبِ شرمندہ گوشِ سماعت ہوں  
 پریشان ہوں میں مشیتِ خاک لیکن کچھ نہیں کھلتا  
 ہوں کہ آئینہ ہوں یا گردِ کدورت ہوں

محبت کے شور سے دل سراپا نور ہوتا ہے  
 ذرا سے بیم سے پیدا ریاض طور ہوتا ہے  
 اجازا ہے تمیز ملت رائیں نے قومیں کر  
 مرے اہل وطن کے دل میں کچھ فکرِ وطن بھی ہے  
 سرشک چشمِ مسلم میں ہے نیسان کا اثر پیدا  
 خلیل اللہ کے دریا میں ہونگے پھر گھر پیدا  
 خدائے لم یزل کا دستِ قدرت تـورِ زبان تـو ہے  
 یقین پیدا کر اے غافل کہ مغربِ گمان تو ہے  
 بٹانِ رنگ و خون کو توڑ کر ملت میں گم ہو جا  
 نہ تورانی رہے بقی نہ ایرانی نہ انغای  
 یقین افراد کا سرمایہ تعبیرِ ملت ہے  
 یہی قوت ہے جو صورتِ گری تقدیرِ ملت ہے

6. (a) What are the chief characteristics of the ghazal of Ghālib.  
 Illustrate your arguments by quotations. 10

(b) How far has Iqbal succeeded in imitating Ghālib? Discuss fully  
 and give examples. 5

### THIRD PAPER

*Candidates are required to give their answers in their own  
 words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

A

45

اسکا قاعدہ ہے کہ برسوں روز شیورات کے دن آپ استہان سے نکل کر دریا  
 میں پیرتا ہے اور خوشی کرنا ہے ۔ اشنان کے بعد جب اپنے آسن پر جانے  
 لگتا ہے تب بیمار اور درمند دور دور سے آتے ہیں ۔ دروازے پر بڑی بھیڑ  
 ہوتی ہے ۔ وہ مہنت جسے زمانے کا افلاطون کہا چاہیے نبض اور قارورہ

دیکھتا ہوا چلا جاتا ہے ۔ خدا نے ایسا دستِ شفا اسکو دیا ہے کہ دوا پیتے ہی اثر ہوتا ہے اور مرض بالکل جاتا رہتا ہے ۔ میں نے یہ ماجرا بچشمِ خرد دیکھا اور خدا کی قدرت کو یاد کیا کہ اُس نے ایسے ایسے بندے پیدا کئے ہیں \*

## B

میں نے خیال کیا کہ ہمعینی کے ذریعے سے تعارف پیدا کروں ۔ چنانچہ اُنکے پاس گیا اور دخل در معقولات کے طور پر اپنی مرلویت اور علمیت جتنائی شروع کی ۔ وہ اس پر بھی متوجہ نہوئے ۔ میں اپنا سا منہ لیکر چلا آیا ۔ لیکن مجھکو یقین تھا کہ اس واقعے کا ضرور کوئی خاص سبب ہے ۔ اتفاقاً ایک موقع پر ایک شخص نے میرا مذہب پوچھا ۔ میں نے کہا ”اسلام“ ۔ بولام ”ہنز نہیں ۔ کہیں مسلمان بھی ایسی توبی اورتھتے ہیں“ بدقسمتی سے میرے سر پر ایرانی توبی تھی اور اس وجہ سے تمام عرب مجھکو مجوسی سمجھتے تھے۔ \*

2. Give the force of:—

5

(a) دوا پیتے ہی in ہی (a)

(b) جب اپنے اُس پر جانے لگتا ہے in لگتا (b)

(c) the repetition of دور سے آتے ہیں in دور (c)

(d) the repetition of ایسے ایسے بندے پیدا کیسے ہیں in ایسے (d)

(e) نہیں مسلمان بھی ایسی توبی اورتھتے ہیں in کہیں (e)

3. Write in your own words the story of Hātim Tai and the wood-cutter. 15

4. Translate into Urdū. 20

The Mahrattas made an attack on the town on Monday, January 17. When they arrived near the walls of the fort they found a moat full of water and very deep. They built many bridges across it, but owing to these having been made hurriedly and under the enemy's fire they all broke down. The Mahrattas withdrew that evening, but made a second assault the next day. They crossed the moat by means of ladders, but found that they could not scale the walls as these were too high.

5. Write an account, in your own words, of any two of the following places as given by Shibli:— 15

Cyprus, Aden, Port Said.

## FRENCH (HONOURS)

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English *any two* of the following:—

26

- (a) Nous partirons demain.  
Hernani, n'allez pas sur mon audace étrange  
Me blâmer. Êtes-vous mon démon ou mon ange?  
Je ne sais, mais je suis votre esclave. Écoutez.  
Aller où vous voudrez, j'irai. Restez, partez,  
Je suis à vous. Pourquoi fais-je ainsi? je l'ignore.  
J'ai besoin de vous voir et de vous voir encore  
Et de vous voir toujours. Quand le bruit de vos pas  
S'efface, alors je crois que mon cœur ne bat pas,  
Vous me manquez, je suis absente de moi-même;  
Mais dès qu'enfin ce pas que j'attends et que j'aime  
Vient frapper mon oreille, alors il me souvient  
Que je vis, et je sens mon âme qui revient.
- (b) Oui, je suis de ta suite, et c'est toi qui l'as dit!  
Va, jamais courtisan de ton lever maudit,  
Jamais seigneur baisant ton ombre, ou majordome  
Ayant à te servir abjuré son cœur d'homme.  
Jamais chiens de palais dressés à suivre un roi  
Ne seront sur tes pas plus assidus que moi!  
Ce qu'ils veulent de toi, tous ces grands de Castille,  
C'est quelque titre creux, quelque hochet qui brille,  
C'est quelque mouton d'or qu' on se va pendre au cou;  
Moi, pour vouloir si peu je ne suis pas si fou!  
Ce que je veux de toi, ce n'est point faveurs vaines,  
C'est l' âme de ton corps, c'est le sang de tes veines.  
C'est tout ce qu' un poignard, furieux et vainqueur,  
En y fouillant longtemps peut prendre au fond d'un cœur.
- (c) Je suis une force qui va!  
Agent aveugle et sourd de mystères funèbres!  
Une âme de malheur faite avec les ténèbres!  
Oh vais-je? Je ne sais. Mais je me sens poussé  
D'un souffle impétueux, d'un destin insensé.  
Je descends, je descends, et jamais ne m'arrête.  
Si par fois, haletant, j' ose tourner la tête,  
Une voix me dit: Marche! et l' abîme est profond,  
Et de flamme ou de sang je le vois rouge au fond!  
Cependant, à l' entour de ma course farouche,  
Tout se brise, tout meurt. Malheur à qui me touche!  
Oh! fuis! détourne-toi de mon chemin fatal,  
Hélas, sans le vouloir, je te ferai du mal!

2. Write a short essay on Spanish chivalry as depicted in 'Hernani'. 10

Or,

Criticize the character of Don Ruy de Gonur as the ideal knight.

3. Describe the part played by Hugo's 'Hernani' in the Romantic movement in French literature. 10

Or,

What are the origin and essential tenets of the Romantic movement in French literature?

4. Examine the construction of the play 'Hernani' from the point of view of realistic criticism. 10

Or,

'The rhetoric of Hugo sweeps all criticism of its moorings.' Examine the statement in the light of 'Hernani.'

5. Illustrate:— 10

- (a) French negative without 'pas'.
- (b) French negative without 'ne'.
- (c) 'Ne' without the negative sense.
- (d) 'Ne pas' used together expressing negative.
- (e) 'Savoir' with 'ne' only and with 'ne . . . pas.'

6. Where does French require the subjunctive where, English does not? 10

7. Translate into English *any two* of the following:— 24

- (a) Quand vous serez bien vieille, au soir à la chandelle  
Assise auprès du feu, dévidant et filant,  
Direz chantant mes vers, et vous émerveillant :  
Ronsard me célébrait du temps que j'étais belle.

Je serai sous la terre, et fantôme sans os  
Par les ombres myrteux je prendrai mon repos :  
Vous serez au foyer une vieille accroupie,  
Regrettant mon amour et votre fier dédain.

- (b) Le main que baise une main frêle  
Luit dans le soir rose et gris vaguement,  
Tandis qu' avec un très léger bruit d'aile  
Un air bien vieux, bien faible et bien charmant  
Râde discret, épeuré quasiment,  
Par le boudoir longtemps parfumé d' Elle.

Qu'est-u que c'est que ce berceau soudain  
Qui lentement dorlote mon pauvre être?  
Que voudrais-tu de moi, doux chant badin?  
Qu'as tu voulu, fin refrain incertain  
Qui va tantôt mourir vers la fenêtre  
Ouverte un peu sur le petit jardin?

- (c) O matin de quinze ans, où le corps tendre et preste  
S'alliait à l' arôme, à la chabur céleste  
Où les oiseaux montaient d' un vol facile et pur,  
Où tout l'être semblait aspiré par l' azur,  
Où l'on palpitait l' oduer, l' air, l' horizon, les vagues  
Avec la main qui tremble et l'esprit qui divague!  
Matins où l'on était solitaire et vainqueur,  
Où l'on sentait courir les fleuves sur son cœur,  
Où l'on goûtait, buvant l'aurore sur la aime,  
La divine pudeur de se sentir sublime!



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate three of the following extracts:—

30

(a) Il avait trop voulu, des choses infinies.....L'infini ! qui ne l'aime pas?.....Jeune, il aimait la mer, les Alpes.....Ces volontés immenses nous semblent folles, et les projets, sans nul doute, dépassaient les moyens. Cependant, en ce siècle, on avait vu de telles choses que les idées du possible et de l'impossible s'étaient un peu brouillées. C'était le temps où l'enfant don Henri, cousin du Téméraire, pénétrait ce profond Midi, le monde de l'or, et chaque jour en rapportait des monstres. Et, sans aller si loin, sous nos yeux, les rêves les plus bizarres s'étaient trouvés réels ; les révolutions inouïes des Roses, ces changements à vue, les royaumes gagnés, perdus d'un coup de dé, tout cela étendait le possible bien loin dans l'improbable.

(b) Ses sujets néanmoins n'avaient pas tout le tort. Indépendamment de ce dur gouvernement qui les avait surmenés, excédés, pour d'autres raisons encore, plus générales et plus durables, ils déclinaient, la vie baissait chez eux, leurs ressources n'étaient plus les mêmes. Le jeune empire de la maison de Bourgogne se trouvait déjà vieux, sous son pompeux habit. Les arts qui enrichissent avaient été longtemps concentrés dans les Pays-Bas, puis ils s'étaient répandus au dehors. Louvain, Gand, Ypres ne tissaient plus pour le monde ; l'Angleterre imitait. Liège et Dinant ne battaient plus le fer, le cuivre, pour la France et l'Allemagne : les fugitifs y avaient désormais porté leur enclume.

(c) Donc, je ne connais ce Charles que sous de mauvais aspects, et vous voudriez que moi, homme de bon sens, j'allasse me faire gratuitement l'esclave d'une créature qui m'est inférieure en capacité militaire, en politique et en dignité ? Non, Monsieur ; quand quelque grande et noble action m'aura appris à apprécier Charles, je reconnaitrai peut-être ses droits à un trône dont nous avons renversé le père, parce qu'il manquait des vertus qui jusqu'ici manquent au fils ; mais jusqu'ici, en fait de droits, je ne reconnais que les miens : la révolution m'a fait général, mon épée me fera protecteur si je veux. Que Charles se montre, qu'il se présente, qu'il subisse le concours ouvert au génie, et surtout qu'il se souvienne qu'il est d'une race à laquelle on demandera plus qu'à tout autre. Ainsi, Monsieur, n'en parlons plus, je ne refuse ni n'accepte : je me réserve, j'attends.

(d) Quel beau métier que celui de roi ! disait cet homme entraîné dans sa contemplation, et si bien absorbé qu'il s'arrêta au milieu du chemin, laissant défilér le cortège. Voici en vérité un prince cousu d'or et de diamants comme un Solomon, émaillé de fleurs comme une prairie printanière ; il va puiser à pleines mains dans l'immense coffre où ses sujets très fidèles aujourd'hui, naguère très infidèles, lui ont amassé une ou deux charretées de lingots d'or. On lui jette des bouquets à l'enfour-dessous, et il y a deux mois, s'il se fût présenté, on lui eût envoyé autant de boulets et de balles qu'aujourd'hui on lui envoie de fleurs. Décidément, c'est quelque chose que de naître d'une certaine façon, rien déplaît aux vilains qui prétendent que peu leur importe de naître vilains.

2. (a) Describe the causes and results of the English invasion of France during the reign of Louis XI. 10

(b) Give an appreciation of Dumas as a writer, his qualities, and his defects. 10

8. (a) Put suitable prepositions in the blank spaces :— 10
- (i) La salle a vingt pieds—long,—seize—large.
  - (ii) —ce moment,—France,—Vincennes, il n'est pas d'homme plus heureux que vous.
  - (iii) Le duc prit son couteau—lame—argent—enlevé le couvercle.
  - (iv) —quelle manière a-t-il enlevé le couvercle?
- (b) Change the infinitive into the appropriate mood and tense :— 10
- (i) Il (espérer) que le poids (ne pas être) trop lourd pour qu'il (pouvoir) le soulever.
  - (ii) Il demanda un compagnon quel qu'il (être), ce compagnon (devoir)-il être ce fou dont il (entendre) parler.
  - (iii) Depuis six ans qu'il (être) en prison, quel travail, si lent qu'il (être), (ne pas achever)?
  - (iv) Veux-tu que je te (faire) apporter à déjeuner?

4. Translate into English :—

30

(a) Par la fenêtre, quand il ne dormait pas, maître Humeau regardait les ânes monter au moulin, comptait les fermes où, le plus souvent, on lui devait quelque argent, et si les moissons mûrissaient, se réjouissait de ce que le bien des autres allait lui rapporter de profits assurés. 'Un sac de blé, deux sacs de farine', c'était sa devise et sa mesure. Il y gagnait encore assez pour être devenu, en peu d'années, le plus gros personnage du pays. Toute la semaine il était meunier, blanc des pieds à la tête ; mais le dimanche, on l'eût pris pour un vrai seigneur, tant il avait de beaux habits, la mine fraîche et l'air content de vivre. 'Maître Humeau' disaient tous les gens. 'Eh, mon bonhomme!' répondait-il.

(b) Le soleil s'est caché. La nuit commence à descendre. Une petite pluie froide, vilaine, pénétrante, s'est mise à tomber. De temps en temps les rafales d'un vent sinistre la lancent lamentablement aux vitres des maisons et aux visages des rares passants qui se retournent stupéfaits pour suivre des yeux quelque chose de rouge et jaune qui trotte dans la boue, clopin-clopant. C'est un pauvre polichinelle bien bouleversé, bien malheureux. Il est tout crotté, tout transi ; il a perdu un de ses sabots ; un coup de vent lui a pris son chapeau ; il est tombé dans une flaque d'eau, et s'est relevé trempé et tout sali. Les cailloux font mal à ses pieds déchaussés, et le chemin est long. Mais trott court tousjours.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer the questions marked with an asterisk (\*) and ANY TWO others.*

\*1. Translate into French any two of the following passages :— 40

(a) Our start, I think, was the most interesting. The people of St. John's gathered on our aerodrome and wished us a pleasant and safe voyage across the Atlantic. Our aerodrome was rather narrow, and

the wind was blowing slightly across. Any way, we had the help of a good strong breeze. But, after getting off, we had to fly through a valley where we got some very nasty bumps from the gusts of the wind, which made it very alarming to the spectators. Luckily, we got to the end of the valley into the uninterrupted air, when we quickly climbed out of the gusts. The weather was very good at the start, but ahead we could see the Newfoundland fog. The sky was also obscured owing to the clouds, which got worse and worse.

(b) My telescope has shown me many wonderful things on the moon, and I shall presently mention some of them.

You all know that a telescope is like a big magnifying glass, and that when you look at a newspaper through a magnifying glass, the print appears much larger. Just in the same way, when we look at the moon through a telescope, we see it larger, and so we can make out features which are quite invisible to the naked eye. When the night is fine, and the clouds are not in the way, I open the observatory and take off the covering which keeps the dust from the telescope. Then I point the instrument to the moon and look through the eyepiece. I wish you could look with me for the sight is very beautiful. All over the moon's surface I can see great mountain ranges, while there are also a great number of volcanoes.

(c) 'I will enter the Queen's bed-chamber' said the Lady Lochleven ; 'my business is express.'

As she advanced to the door, the voice of Catherine Seyton was heard from within-- 'No one can enter here ; the Queen sleeps.' 'I will not be controlled, young lady' replied the Lady Lochleven : 'there is no inner bar, and I will enter in spite of you.'

'There is indeed no inner bar' answered Catherine firmly ; 'but there are the staples where that bar should be, and into those staples have I thrust my arms like an ancestress of your own, when, better employed than the Douglasses of our days, she thus defended the bed-chamber of her sovereign against murderers. Try your force, then, and see whether a Seyton cannot rival in courage a maiden of the house of Douglas.'

\*2. Translate into French the following idioms :—

20

That is not the question.

What is the news?

It is getting late.

To burst out laughing.

Every inch a King.

They are hand and glove together.

I cannot make head or tail of it.

To walk up and down.

It is all up with him.

What are you up to?

\*3. State, with examples, the various rules of agreement (concord) of the past passive participle. 12

4. When is QUELQUE spelled QUELQUE (invariable) or QUELQUES or QUEL QUE? 8

\*5. What do you know of the Seven Years' War, its causes and its results for France? 12

6. What is the Revocation of the Edict of Nantes? What were its consequences? 8

7. Outline the history of France during the Restoration period (1815—1830). 8

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any three of the following:—

24

(a) Je crois, en bon chrétien, votre moitié fort sage ;  
Mais une femme habile est un mauvais présage ;  
Et je sais ce qu'il coûte à de certains gens  
Pour avoir pris les leurs avec trop de talents.  
Moi, j'irai me charger d'une spirituelle  
Qui ne parlerait rien que cercle et que ruelle ;  
Qui de prose et de vers ferait de doux écrits,  
Et que visiteraient marquis et beaux esprits,  
Tandis que, sous le nom du mari de madame,  
Je serai comme un saint que pas un ne réclame?

(b) A ce bel argument, à ce discours profond,  
Ce que Pantagruel à Pomerge répond :  
Pressez-moi de me joindre à femme autre que sotie,  
Prêchez, patrocinez jusqu'à la Pentecôte ;  
Vous serez ébahi, quand vous serez au bout,  
Que vous ne m'aurez rien persuadé du tout.

(c) Chacun a ses plaisirs qu'il se fait à sa guise :  
Mais pour ceux que du nom de galants on baptise,  
Ils ont à ce pays de quoi se contenter,  
Car les femmes y sont faites à coquetier :  
On trouve d'humeur douce et la brune et la blonde,  
Et les maris aussi les plus bénins du monde.  
C'est un plaisir de prince, et des tours que je vois  
Je me donne souvent la comédie à moi.  
Peut-être en avez-vous déjà féru quelqu'une.  
Vous est-il point encore arrivé de fortune?

(d) Je ne voudrais pas qu'il sût ce qu'il ignore.  
Mais je ne suis pas homme à guber le morcean,  
Et laisser un champ libre aux vœux du damoiseau,  
J'en veux rompre le cours, et, sans tarder, apprendre  
Jusqu'où l'intelligence entre eux a pu s'étendre :  
J'y prends pour mon honneur un notable intérêt ;  
Je la regarde en femme, aux termes qu'elle en est ;  
Elle n'a pu faillir sans me couvrir de honte,  
Et tout ce qu'elle fait enfin est sur mon compte,  
Eloignement fatal ! voyage malheureux !

2. Write notes on the words and expressions *italicized* above in Question 1 in the extracts selected by you. 9

3. Give a time analysis of the play 'École des Femmes'. 15

Or,

'Molière's characters are types rather than individuals.'

Criticize the remark by an examination of the characters depicted in 'École des Femmes'.

4. Explain the exact significance of three of the following popular expressions: *bailler une comparaison*, *amitié goulee*, *je n'ai la berlue*, *la griffe est là-dessous*, *fou fieffé*. 10

5. Describe the character of Arnolphe or Agnès. 6

6. Correct *six* of the following :— 12

- (a) Combien petite est la terre en comparaison au soleil.
- (b) Je crois<sup>t</sup> que vous trompez et que vous ne réussirez.
- (c) Je connais personne qui ne fait quelquefois des fautes.
- (d) Si vous avez froid que ne mettez vous pas votre manteau?
- (e) Je ne nie pas qu'il soit coupable.
- (f) On arracha l'enfant entre les bras de sa mère.
- (g) L'article se met devant le nom.

••••• Ne laissez entrer qui se soit dans ma chambre.

7. Translate into French *any two* of the following :— 24

(a) The pure Latin language, as we read it in the best ancient authors, possesses a complicated syntax and many elliptical modes of expressions which give vigour and elegance to style, but are not likely to be readily caught by the people. If, however, the citizens of Rome had spoken it with entire purity, it is to be remembered that Latin, in the later times of the republic, or under the empire, was not, like the Greek of Athens, or the Tuscan of Florence, the idiom of a single city, but a language spread over countries in which it was not originally vernacular, and imposed by conquest upon many parts of Italy, as it was upon Spain and Gaul. Thus we find even early proofs that solecisms of grammar, as well as barbarous phrases and words unauthorized by use of polite writers, were very common in Rome itself; and in every succeeding generation, for the first centuries after the Christian era, these became more frequent and inevitable.

(b) The most celebrated, and certainly the most brilliant performance in the path of fiction, that belongs to this age, is that of Rabelais. Few books are less likely to obtain the praise of a rigorous critic; but few have more the stamp of originality, or show a more redundant fertility, always of language, and sometimes of imagination. He bears a slight resemblance to Lucian, and a considerable one to Aristophanes. His reading is large, but always rendered subservient to ridicule; he is never serious in a single page, and seems to have had little other aim, in his first two volumes, than to pour out the exuberance of his animal gaiety.

(c) The influence of Lorenzo de Medici over literature extended from 1470 to his death in 1492. He sought in ancient learning something more elevated than the narrow, though necessary, researches of criticism. In a villa over-hanging the towers of Florence, on the steep slope of that lofty hill crowned by the mother city, the ancient Fiesole, in gardens which Tully might have envied, he delighted his hours of leisure with the beautiful visions of Platonic philosophy, for which the summer stillness of an Italian sky appears the most congenial accompaniment. Mountains, bright with various hues, and clothed with wood, bounded the horizon, and, on most sides, at no great distance; while the level country bore witness to his agricultural improvements, the classic diversion of a statesman's cares.

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## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate three of the following extracts:— 30

(a) Dès lors, ni cor ni cris, toujours même silence, sauf la grenouille du fossé qui chasse après vous..... Toute la joie du manoir, tout le sel de la vie, c'était la chasse ; au matin le réveil du cor ; le jour, la course au bois et la fatigue ; au soir, le retour, le triomphe, quand le vainqueur siégeait à la longue table avec sa bande joyeuse. Cette table où le chasseur posait la tête superbement ramée, la hure énorme, où il refaisait son courage avec la chair des nobles bêtes, tuées à *sans* péril, qu'y servir à présent ?

(b) Le salut du roi tenait surtout à une chose, c'est qu'il n'était pas tout entier en prison. Prisonnier à Péronne, il était libre ailleurs en sa très bonne armée, en son autre lui-même, Dammartin. Son intérêt visible était que Dammartin n'agit point, mais qu'il restât en armes, et menaçant. Or, Dammartin reçut coup sur coup deux lettres du roi qui lui commandaient tantôt de licencier, tantôt d'envoyer l'armée aux Pyrénées, c'est-à-dire de rassurer les Bourguignons, de leur laisser la frontière dégarnie et libre pour entrer, s'ils le voulaient, après leur course de Liège.

(c) Quand nous exagérons la tendresse que nos amis ont pour nous, c'est souvent moins par reconnaissance que par le désir de faire juger de notre mérite. C'est moins la fertilité de l'esprit qui nous fait trouver plusieurs expédients sur une même affaire, que ce n'est le défaut de lumière qui nous fait arrêter à tout ce qui se présente à notre imagination, et qui nous empêche de discerner d'abord ce qui est le meilleur. Nous aimons toujours ceux qui nous admirent, et nous n'aimons pas toujours ceux que nous admirons. La reconnaissance dans la plupart des hommes n'est qu'une forte et secrète envie de recevoir de plus grands bienfaits.

(d) La sincérité est une ouverture de cœur qui nous montre tels que nous sommes ; c'est un amour de la vérité, une répugnance à se déguiser, un désir de se dédommager de ses défauts, et de les diminuer même par le mérite de les avouer. La confiance ne nous laisse pas tant de liberté : ses règles sont plus étroites ; elle demande plus de prudence et de retenue, et nous ne sommes pas toujours libres d'en disposer. Il ne s'agit pas de nous uniquement, et nos intérêts sont mêlés d'ordinaire avec les intérêts des autres : elle a besoin d'une grande justesse pour ne pas livrer nos amis en nous livrant nous-mêmes, et pour ne pas faire des présents de leur bien, dans la vue d'augmenter le prix de ce que nous donnons.

2. (a) Give an idea of the character and policy of Louis XI, and of the influence they had on the history of France. 10

(b) What prompted La Rochefoucauld to write his 'Maximes'? What is the theme running through them, and of what kind of society are they the reflexion? 10

3. (a) Put the following in the negative form:— 5

(i) La petite troupe s'avance, (ii) La petite troupe s'est avancée, (iii) Apportez-moi mon épée, (iv) Vous verrez quelque chose de joli, (v) J'ai vu quelqu'un au bastion.

- (b) Put personal pronouns in the blank spaces:— 5

(i) —seul,—l'ai fait, (ii) —seul, l'a fait, (iii) chacun pour—, (iv) Aide—le ciel t'aidera, (v) On ne doit pas toujours penser à—.

- (c) Give the nouns corresponding to the following :— 5  
partir, blesser, croire, franc, pâlir.
- (d) Give the opposite of the following :— 5  
content, aisément, favorable, se fier à, habitable.

1. Translate into into French :— 30

(a) The three young men proceeded merrily towards the village the innkeeper had told them about. Scarcely had they gone more than half a mile when they met a very old man with a white beard, at a spot where the road leads across a field. This old man greeted them civilly, saying: 'Good day, gentlemen, God bless you.' But they laughed at him, asking him why he had lived so long and why his hair was so white. 'Because,' replied the old man, 'I cannot find any one in the whole world who is willing to exchange his youth for my old age, though I have searched everywhere.' The young men did not know what to reply. So they went their way after asking the old man the road to the village. They walked quickly until they came to the oak tree which the old man had pointed out to them.

(b) But what is the matter? For the last few minutes the train has been slowing down; it stops. What is the meaning of this halt in the dead of night? Some of the passengers have awakened. One terrified man, having lowered the window, is leaning out; but he can see nothing on account of the darkness. What can have happened? At last we catch the glimpse of a guard's lamp. He, poor man, was walking alongside the carriages, in the snow, not knowing what to do. Several voices shout at the same time: 'Why have we stopped? Why don't you go on?' The guard, however, seems to take no notice of the question and walks on towards the engine. 'The Parisians will have to do without their coffee to-morrow morning,' was all he said. I do not know how the Parisians breakfasted the following morning, but I do know it was nearly dinner-time when we got to Paris.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

*Answer the questions marked with an asterisk ( \* ) and*

*ANY TWO others.*

\*1. Translate into English any two of the following passages :— 40

- (a) Rentre en toi-même, Octave, et cesse de te plaindre.  
Quoi! tu veux qu'on t'épargne, et n'as rien épargné!  
Songe aux fleuves de sang où ton bras s'est baigné,  
De combien ont rougi les champs de Macédoine,  
Combien en a versé la défaite d'Antoine,  
Combien celle de Sexte, et revois tout d'un temps  
Pérouse au sien noyée et tous ses habitants;  
Remets dans ton esprit, après tant de carnages,  
De tes proscriptions les sanglantes images,  
Où toi-même, des tiens devenu le bourreau,  
Au sein de ton tuteur enfonças le couteau;

Et puis ose accuser le destin d'injustice  
 Quand tu vois que les tiens s'arment pour ton supplice,  
 Et que, par ton exemple, à ta perte guidés  
 Ils violent des droits que tu n'as pas gardés.

(b) Lâches et indignes chrétiens, par vous le christianisme est avili et méconnu. L'orgueil a rompu ses digues et inondé la terre ; toutes les conditions sont confondues ; le faste s'appelle politesse, la plus folle vanité, une bienséance ; les insensés entraînent les sages et les rendent semblables à eux ; la mode, si ruineuse par son inconstance et par ses excès capricieux, est une loi tyrannique à laquelle on sacrifie toutes les autres ; les dernier devoir est celui de payer ses dettes. Les prédicateurs n'osent plus parler pour les pauvres, à la vue d'une foule de créanciers dont les clameurs montent jusqu'au ciel. Ainsi la justice fait taire la charité, mais la justice elle-même n'est plus écoutée. Plutôt de modérer les dépenses superflues, on refuse cruellement le nécessaire à ses créanciers. La simplicité, la modestie, la frugalité, la probité exacte de nos pères, leur ingénuité, leur pudeur, passent pour des vertus rigides et austères d'un temps trop grossier.

(c) J'entrais un jour chez un homme, qui a beaucoup vécu, beaucoup fait et beaucoup souffert. Il tenait à la main un livre qu'il venait de fermer, et semblait plongé dans un rêve ; je vis, non sans surprise, que ses yeux étaient pleins de larmes. Enfin, revenant à lui-même : 'Elle est donc morte ! dit-il—Qui?—La pauvre Jeanne d'Arc.'

Telle est la force de cette histoire, telle est sa tyrannie sur le cœur, sa puissance pour arracher les larmes. Bien dite ou mal contée, que le lecteur soit jeune ou vieux, qu'il soit, tant qu'il voudra, affermi par l'expérience, endurci par la vie, elle le fera pleurer. Hommes, n'en rougissez pas, et ne vous cachez pas d'être hommes. Ici, la cause est belle. Nul deuil récent, nul événement personnel n'a droit d'émouvoir davantage un bon et digne cœur.

2. Give the etymology of the following French words :--

Rez-de-chaussée, Lundi, Orfèvre, Assez, Montmartre, Angoisse, Août, Seigneur.

\*3. Give the English equivalents to the following idioms :--

Ne vous en faites pas. Tâter le terrain.  
 Avoir le diable au corps.  
 Mêlez-vous de vos affaires.  
 Crier à tue-tête. Loin des yeux, loin du cœur  
 Une fois n'est pas coutume.

Il n'est pire eau que l'eau qui dort.  
 Plus on est de fous, plus on rit. Rira bien qui rira le dernier.

\*4. Who was Bossuet? In what ways did he prove a great orator and a great writer?

5. Explain what was "la Querelle des Anciens et des Modernes".

6. What do you know either of L'Histoire Naturelle of BUFFON or of his views on style?

\*7. Compare the poetry of Lamartine with the poetry of Victor Hugo.



## FRENCH—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

1. Translate any two of the following extracts into English :— 40

(a) Je ne m'étois chargé dans cette occasion  
Que d'excuser César d'une seule action ;  
Mais puisque, sans vouloir que je le justifie,  
Vous me rendez garant du reste de sa vie,  
Je répondrai, madame, avec la liberté  
D'un soldat qui sait mal *farder* la vérité.  
Vous m'avez de César *confié* la jeunesse,  
Je l'avoue ; et je dois m'en souvenir sans cesse.  
Mais vous *aviez*-je fait serment de le trahir,  
D'en faire un empereur qui ne sut qu'obéir ?  
Non. Ce n'est plus à vous qu'il faut que j'en *réponde* :  
Ce n'est plus votre fils, c'est le maître du monde.

(b) Madame, quel bonheur me rapproche de vous ?  
Quoi ! je puis donc jurer d'un entretien si doux ?  
Mais, parmi ce plaisir, quel chagrin me dévore !  
Hélas ! puis-je espérer de vous revoir encore ?  
Faut-il que je dérobe, avec mille détours,  
Un bonheur que vos yeux m'accordoient tous les jours ?  
Quelle nuit ! Quel réveil ! Vos pleurs, votre présence  
N'ont point de ces cruels désarmé l'insolence !  
Que faisoit votre amant ? Quel démon envieux  
M'a refusé l'honneur de mourir à vos yeux ?  
Hélas ! dans la frayeur dont vous étiez atteinte,  
M'avez-vous en secret adressé quelque plainte ?

(c) Il suffit ; j'ai parlé, tout a changé de face :  
Mes soins à vos soupçons ne laissent point de place.  
Je réponds d'une paix jurée entre mes mains ;  
Néron m'en a donné des gages trop certains.  
Ah ! si vous aviez su par combien de caresses  
Il m'a renouvelé la foi de ses promesses ;  
Par quels embrassements il vient de m'arrêter !  
Ses bras, dans nos adieux, ne pouvoient me quitter.  
Sa facile bonté, sur son front répandue,  
Jusqu'aux moindres secrets est d'abord descendue :  
Il s'épanchoit en fils qui vient en liberté  
Dans le sein de sa mère oublier sa fierté.

2. Write grammatical notes on the words italicized in the passage quoted in Question 1 (a).

8. Describe the character of Néron as painted by Racine in his *Britannicus*, and show how far it agrees with what we know about him from history. 12

4. *Either*, Critically examine the following remarks on the character of Agrippine: 'Voici Agrippine, une mère aussi, mais ennemie de son fils et l'aimant pourtant d'un reste d'instinct, fière, ardente et ambitieuse'. 10

Or, Determine the place of Racine as dramatist.

5. Translate the following into English:—

20

Depuis l'enfance j'ai souffert  
D'avoir une âme enthousiaste,  
Car le rêve fait trop contraste  
Avec ce qui nous est offert.  
Mais puis-je changer ma nature?  
Puis-je forcer mes sentiments?  
Ainsi que tant d'autres aimants,  
Je m'en vais trop à l'aventure.  
J'imole tout à mon amour:  
Mon cœur, ma chair, ma raison même.  
Aussi j'éprouve, lorsque j'aime,  
L'orgueil de donner sans retour.

6. Explain the following:—

10

Je porte dans mon sein le deuil profond et grave  
De tout ce que la vie a de noble et de beau.  
J'ai scellé sur mon cœur la pierre du tombeau,  
Mais j'ai pleuré tout bas, car l'orgueil me rend brave.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate two of the following passages:—

30

(a) D'Artagnan profita d'un moment de répit pour examiner la figure de Planchet, qu'il n'avait pas vu depuis un an. L'intelligent Planchet avait pris du ventre, mais son visage n'était pas boursoufflé. Son regard brillant jouait encore avec facilité dans ses orbites profondes, et la graisse, qui nivelle toutes les saillies caractéristiques du visage humain, n'avait encore touché ni à ses pommettes saillantes, indice de ruse et de cupidité, ni à son menton aigu, indice de finesse et de persévérance. Planchet trônait avec autant de majesté dans sa salle à manger que dans sa boutique. Il offrit à son maître un repas frugal, mais tout parisien: le rôti cuit au four du boulanger, avec les légumes, la salade, et le dessert empruntés à la boutique même.

(b) Plus une porte, plus une fenêtre dans ce bâtiment. Les portes avaient été brûlées, quelques-unes sur place, et les charbons en étaient dentelés encore par l'action du feu, qui s'était éteint tout seul, impuissant sans doute à mordre jusqu'au bout ces massives jointures de chêne assemblées par des clous de fer. Quant aux fenêtres, toutes les vitres ayant été brisées, on voyait s'enfuir par les trous des oiseaux de ténèbres que la lueur du falot effarouchait. En même temps des chauves-souris gigantesques se mirent à tracer autour des deux importuns

leurs vastes cercles silencieux, tandis qu'à la lumière projetée sur les hautes parois de pierres on voyait trembloter leur ombre. Ce spectacle était rassurant pour des raisonneurs.

(c) Nous n'avons pas le courage de dire en général que nous n'avons point de défauts et que nos ennemis n'ont point de bonnes qualités ; mais en détail nous ne sommes pas trop éloignés de le croire.—La fortune se sert quelquefois de nos défauts pour nous élever ; et il y a des personnes incommodes dont le mérite serait mal récompensé si l'on n'était bien aise d'acheter leur absence.—Nous arrivons tout nouveaux aux divers âges de la vie, et nous y manquons souvent d'expérience malgré le nombre des années. — Nous aurions souvent honte de nos plus belles actions si le monde voyait tous les motifs qui les produisent. — Le plus grand effort de l'amitié n'est pas de montrer nos défauts à un ami, c'est de lui faire voir les siens.

2. (a) Give an appreciation of Dumas as a historical novelist and apply your remarks to the historical setting of *La Fortune de D'Artagnan*. 14

(b) Discuss Jean-Jacques Rousseau's opinion : '*Les Maximes* sont un livre triste, puisqu'elles indiquent l'amour-propre comme le mobile de la plupart des actions humaines.' 6

3. Form verbs from the following words :—*courage, noir, beau, aigu, triste* ; and abstract nouns from the following :—*amer, doux, bref, long, fort*. 10

4. How are clauses of purpose expressed in French? To illustrate your answer translate the following sentences, and compose a fresh sentence of each type :—(a) They went to fetch the doctor. (b) They stopped in order to speak to me. (c) They stopped in order that I should see them. 10

5. Translate into English :—

30

(a) Pendant que je mangeais mon repas, mon visiteur se promenait dans la chambre d'un air indifférent, l'air d'un homme qui est aujourd'hui ce qu'il était hier et ce qu'il sera demain, dont la vie d'habitude et d'obéissance est réglée comme un papier de musique, qui n'a jamais de parti à prendre ni à se décider sur rien. Je l'observais du coin de l'œil, et j'enviais de toute mon âme sa félicité. Il allait et venait d'un pas mesuré, traînant les pieds. Sa face rougeâtre, son œil terne, ses bras ballants, la courbure de son dos, toute sa personne disait : 'Ainsi ou ainsi, cela n'est bien égal.' Je sentais que si j'avais collé mon oreille à son front rugueux et tanné, je n'y aurais pas entendu le bourdonnement d'une pensée. 'Cette nuit,' me disais-je, 'il dormira.' Il me semblait que le bonheur suprême était de pouvoir dormir.

(b) Ce n'est pas une fable que la fascination exercée par le serpent sur sa proie. Un paysan nous racontait qu'étant un jour à travailler dans un champ, il remarqua un moineau perché sur un tas de pierres, où il semblait retenu malgré lui par d'invisibles liens. Le cou gonflé et tendu, la plume hérissée, il poussait des cris inquiets, presque désespérés. On eût dit que, par instants, il cherchait à s'envoler, mais qu'une puissance mystérieuse paralysait l'effort de son aile, le condamnait à demeurer en place. Ayant tourné la tête, le paysan vit sortir d'un buisson une énorme couleuvre, qui rampait lentement, puis s'arrêtait, puis recommençait à ramper, sans quitter des yeux le malheureux moineau, qu'elle s'appropriait à dévorer. Délivré de son ennemi, l'oiseau partit comme un trait et se perdit dans l'espace.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer those questions marked with an asterisk (\*), and any TWO others.*

\*1. Translate into English any two of the following passages:—

(a) Elle s'en allait ainsi, le cerveau occupé de ces pensées rageuses et vindicatives, quand tout à coup elle sursauta et s'immobilisa, un cri prêt à jaillir de ses lèvres. . . .

Dans une fissure du roc s'encastrait la tête d'un Indien. En une mimique significative, cet homme recommandait à Trinidad le silence. Puis il dit rapidement, dans un excellent espagnol:

—Le Grand-Aigle a besoin de parler à ma sœur. Veut-elle venir demain soir jusqu'à lui?

La jeune fille tressaillit de saisissement et resta un moment sans parole. Puis elle balbutia:

—Demain soir? Mais je ne puis pas! . . . Je ne puis sortir de la tente sans qu'on s'en aperçoive. . . .

—Ma sœur croit-elle ne pas y parvenir? . . . Qu'elle y pense. Je serai vers minuit tout près de la tente. Si ma sœur peut en sortir, je lui prendrai la main et je la guiderai dans la nuit, jusqu'au lieu où l'attendra le Grand-Aigle. 20

(b) Les côtes de l'Italie ne tardèrent pas à s'élever du sein des flots. De nouvelles émotions m'attendaient à Brindes. En mettant le pied sur cette terre d'où partent les décrets qui gouvernent le monde, je fus frappé d'un air de grandeur qui m'était jusqu'alors inconnu. Aux élégants édifices de la Grèce succédaient des monuments plus vastes, marqués de l'empreinte d'un autre génie. Ma surprise allait toujours croissant, à mesure que je m'avançais sur la voie Appienne. Le chemin, pavé de larges quartiers de roches, semble être fait pour résister au passage du genre humain: à travers les monts de l'Apulie, le long du golfe de Naples, au milieu des paysages d'Anxur, d'Albe et de la campagne romaine, il présente une avenue de plus de trois cents milles de longueur, bordée de temples, de palais et de tombeaux, et vient se terminer à la ville éternelle, métropole de l'univers et digne de l'être.

(CHATEAUBRIAND.) 20

(c) Hélas! après dix ans je revois la journée,  
Où l'âme de mon père aux cieux est retournée.  
L'heure sonne: j'écoute . . . O regrets! ô douleurs!  
Quand cette heure eut sonné, je n'avais plus de père.  
On retenait mes pas loin du lit funéraire;  
On me disait: 'Il dort;' et je versais des pleurs.

Son image est toujours présente à ma tendresse.  
Ah! quand la pâle automne aura jauni les bois,  
Ô mon père! je veux promener ma tristesse  
Aux lieux où je te vis pour la dernière fois.

Sur ces bords que la Somme arrose,  
J'irai chercher l'asile où ta cendre repose,  
J'irai d'une modeste fleur  
Orner ta tombe respectée,

Et sur la pierre, encor de larmes humectée,  
Redire ce chant de douleur.

(MILLEVOYE.)

20

\*2. Translate into French:—

30

The woman began to excuse herself for the poor meal she was forced to put before her guests. 'Had we known you were coming', she said, 'my goodman and myself would have gone without our supper to give you a better one. But I took the greater part of to-day's milk to make cheese, and our last loaf is already half eaten. I never feel the sorrow of being poor save when a poor traveller knocks at our door. 'Don't trouble yourself; a hearty welcome works miracles.' 'A hearty welcome you shall have,' replied the woman, 'and likewise a little honey and a bunch of grapes.' 'Why, it is a feast, a real feast, and I will do it honour. I think I never felt so hungry in my life.'

3. Point out the difference in meaning between the following words which have the same (or nearly the same) spelling both in French and English:—*lecture*, lecture; *blessor*, to bless; *librairie*, library; *coin*, coin; *avertissement*, advertisement; *exposer*, to expose; *trafic*, traffic; *dresser*, to dress; *grappes*, grapes; *sentence*, sentence. 10

4. How is the conditional mood formed? When is it used? 10

5. Give examples (ONE for each) of sentences with a verb in a compound tense, exhibiting the proper position of the following negations:—*ne pas*, *ne plus*, *ne pas encore*, *ne jamais*, *ne rien*, *ne personne*. 10

\*6. *Either*, Briefly summarize the causes and events of the war between France and Prussia in 1870-1. 10

*Or*, Who was Francis I? How did his home policy and his foreign policy benefit France? 10

## LATIN—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer the two questions marked with an asterisk (\*) and any TWO others.*

Translate:—

25

Nunc locus arborum ingeniis; quae robora cuique, quis color, et quae sit rebus natura ferendis. difficiles primum terrae collesque maligni, tenuis ubi argilla et dumosis calculus arvis, Palladia gaudent silva vivacis olivae. indicio est tractu surgens oleaster eodem plurimus et strati bacis silvestribus agri. at quae pinguis humus dulcique uligine laeta, quique frequens herbis et fertilis ubere campus—qualem saepe cava montis convalle solemus despicere; huc summis liquuntur rupibus amnes, felicemque trahunt limum—quique editus Austro,

et filicem curvis invisam pascit aratris:  
 hic tibi praevalidas olim multoque fluentis  
 sufficient Baccho vitis, hic fertilis uvae,  
 hic laticis, qualem pateris libamus et auro,  
 inflavit cum pinguis ebur Tyrrenus ad aras  
 lancibus et pandis fumantia reddimus exta.

(a) Explain the case of—*ingeniis, rebus, silva, indicio, convalle, uvae*. 10

(b) Give the etymology of *despicere*.

(c) What figure of speech is there in *pateris et auro*?

2. Translate:—

25

Sin ad bella magis studium turmasque ferocis,  
 aut Alpheia rotis praelabi flumina Pisae,  
 et Iovis in luco currus agitare volantis,  
 primus equi labor est animos atque arma videre  
 bellantum, lituosque pati, tractuque gementem  
 ferre rotam, et stabulo frenos audire sonantis;  
 tum magis atque magis blandis gaudere magistri  
 laudibus et plausae sonitum cervicis amare.  
 atque haec iam primo depulsus ab ubere matris  
 audeat, inque vicem det mollibus ora capistris  
 invalidus etiamque tremens, etiam inscius aevi.  
 at tribus exactis ubi quarta accesserit aestas,  
 carpere mox gyrum incipiat gradibusque sonare  
 compositis, sinuetque alterna volumina crurum,  
 sitque laboranti similis; tum cursibus auras,  
 tum vocet, ac per aperta volans, ceu liber habenis,  
 aequora vix summa vestigia ponat harena;  
 qualis Hyperboreis Aquilo cum densus ab oris  
 incubuit, Scythiaeque hiemes atque arida differt  
 nubila; tum segetes altae campique natantes  
 lenibus horrescunt flabris, suminaeque sonorem  
 dant silvae, longique urgent ad litora fluctus;  
 ille volat, simul arva fuga, simul aequora verrens.

Show by what means Virgil sets before the very eyes and ears of his readers a vivid picture of the speed of the racehorse, in the above extract. 10

3. Translate:—

25

Ecce autem duro fumans sub vomere taurus  
 concidit et mixtum spumis vomit ore cruorem  
 extremosque ciet gemitus. it tristis arator,  
 maerentem abiungens fraternam morte iuvenum,  
 atque opere in medio defixa relinquit aratra.  
 non umbrae altorum nemorum, non mollia possunt  
 prata movere animum, non, qui per saxa volutus  
 purior electro campum petit amnis; at ima  
 solvuntur latera, atque oculos stupor urget inertis,  
 ad terramque fluit devexo pondere cervix.  
 quid labor aut benefacta iuvant? quid vomere terras  
 invertisse gravis? atqui non Massica Bacchi  
 munera, non illis epulae nocuere repostae:  
 frondibus et victu pascuntur simplicis herbae,  
 pocula sunt fontes liquidi atque exercita cursu  
 flumina, nec somnos abruptit cura salubris.  
 tempore non alio dicunt regionibus illis  
 quaesitas ad sacra boves Iunonis, et uris  
 imparibus ductos alta ad donaria currus.

(a) Scan the fourth line of this passage, and say what special feeling the poet wanted to express by the rhythm of this line. 10

(b) Compare the language used by Virgil in lines 6 to 8 (*non umbræ*, &c.) with the language used by Lucretius in a similar context:—

Nec tenerae salices, atque herbae rore vigentes,  
fluminaque illa queunt summis labentia ripis  
oblectare animum, subitamque avertere curam.

\*4. *Either*, In his conception of Nature, does Virgil follow the lead of his predecessor Lucretius? Explain. 10

*Or*, What do you know of the technical arrangement of words, syllables, and letters, by which Virgil produced such remarkable effects in melody and rhythm? Quote typical lines of the poet to illustrate your answer.

\*5.

#### UNSEEN TRANSLATION

20

*One of the companions of Ulysses relates how they were changed into pigs by their hostess Circe.*

Haec ubi nos vidit, dicta acceptaque salute,  
diffudit vultus et reddidit omnia votis.  
nec mora, misceri tosti iubet hordea grani  
mellaque vimque meri cum lacte coagula passo,  
quique sub hac lateant furtim ducedine, sucos  
adiicit: accipimus sacra data pocula dextra.  
quae simul arenti sitientes hausimus ore,  
et tetigit summos virga dea dira capillos—  
et pudet et referam—, saetis horrescere coepi,  
nec iam posse loqui, pro verbis edere raucum  
murmur, et in terram toto procumbere vultu;  
osque meum sensi pando occalescere rostro,  
colla tumere toris, et qua modo pocula parte  
sumpta mihi fuerant, illa vestigia feci.  
cumque eadem passis—tantum medicamina possunt!—  
claudor hara.

hara = *pigsty*.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate:—

8

(a) Dictator, exercitu consulis accepto a Fulvio Flacco legato, per agrum Sabinum Tibur, quo diem ad conveniendum edixerat novis militibus, venit. Inde Praeneste ac transversis limitibus in viam Latinam est egressus, unde, itineribus summa cum cura exploratis, ad hostem ducit, nullo loco, nisi quantum necessitas cogeret, fortunae se commisurus. Quo primum die haud procul Arpis in conspectu hostium posuit castra, nulla mora facta, quin Poenus educeret in aciem copiamque pugnandi faceret. Sed ubi quieta omnia apud hostes nec castra ullo tumultu mota videt, increpans quidem, victos tandem quos Martios animos Romanis, debellatumque et concessum propalam de virtute ac

gloria esse, in castra rediit; ceterum tacita cura animum incessit, quod cum duce haudquaquam Flamini Sempronique simili futura sibi res esset ac tum demum edocti malis Romani parem Hannibali ducem quaesissent.

(b) Duplex inde Hannibali gaudium fuit; neque enim quicquam eorum, quae apud hostes agerentur, eum fallebat et perfugis multa indicantibus et per suos explorantem: nam et liberam Minucii temeritatem se suo modo captaturum, et sollertiae Fabii dimidium virium decessisse. Tumulus erat inter castra Minucii et Poenorum, quem qui occupasset, haud dubie iniquiorem erat hosti locum facturus. Eum non tam capere sine certamine volebat Hannibal, quanquam id operae pretium erat, quam causam certaminis cum Minucio, quem procursum ad obsistendum satis sciebat, contrahere. Ager omnis medius erat prima specie inutilis insidiatori, quia non modo silvestre quicquam, sed ne vepribus quidem vestitum habebat, re ipsa natus tegendis insidiis, eo magis quod in nuda valle nulla talis fraus timeri poterat; et erant in anfractibus cavac rupes, ut quaedam earum ducenos armatos possent capere.

2. What special advantages had Hannibal in his war in Italy? 8

3. Write careful notes to explain—*dictator*, *via Latina*, *acies*, *consul*, *legatus*. 8

What was the policy of Fabius?

Where were Tibur and Praeneste?

4. Illustrate from the two set passages any peculiarities of Livy's grammar. 'He shows some signs of decadence from the pure language of Cicero and Caesar', it is said. Comment on this statement. 8

5. *Either*, Account for the various subjunctives in the first set passage, and explain carefully the uses of *quominus* and *quin*. 8

*Or*, Explain the use of the gerund and gerundive in—*conveniendum*, *obsistendum*, *tegendis*, in Question 1.

6. Translate:— 8

(a) A rebus gerendis senectus abstrahit. Quibus? An eis quae iuventute geruntur et viribus? Nullaene igitur res sunt seniles quae vel infirmis corporibus animo tamen administrantur? Nihil ergo agebat Q. Maximus; nihil L. Paulus, pater tuus, Scipio, socer optimi viri, filii mei. Ceteri senes, Fabricii, Curii, Coruncanii, cum rem publicam consilio et auctoritate defendebant, nihil agebant. Ad Appi Claudii senectutem accedebat etiam ut caecus esset; tamen is, cum sententia senatus inclinaret ad pacem cum Pyrrho foedusque faciendum, non dubitavit dicere illa quae versibus persecutus est Ennius:

Quo vobis mentes, rectae quae stare solebant  
antehac, dementes sese flexere viai?

ceteraque gravissime: notum enim vobis carmen est; et tamen ipsius Appi exstat oratio.

(b) At sunt morosi et anxii et iracundi et difficiles senes. Si quaerimus, etiam avari: sed haec morum vitia sunt, non senectutis. Ac morositas tamen et ea vitia quae dixi habent aliquid excusationis, non illius quidem iustae sed quae probari posse videatur: contemni se putant, despici, illudi: praeterea in fragili corpore odiosa omnis offensio est. Quae tamen omnia dulciora fiunt et moribus bonis et artibus; idque cum in vita tum in scena intellegi potest ex eis fratribus qui in Adelphis sunt. Quanta in altero duritas, in altero comitas! Sic se res habet; ut enim non omne vinum, sic non omnis aetas vetustate coacescit. Severitatem in senectute probo, sed eam sicut alia modicam; acerbita-



tem nullo modo. Avaritia vero senilis quid sibi velit non intellego. Potest enim quidquam esse absurdius quam quo minus viae restat eo plus viatici quaerere?

7. Write brief notes on the proper names in Question 6 (a). What do you know of the writings of Ennius? 8

8. How do you account for the subjunctives—*administrentur, esset, inclinaret*, and the indicative *defendebant*, in Question 6 (a)? 8

9. Either, Write short biographies of the three men whose conversation makes up the *De Senectute*. 6

Or, Give a summary, in not more than 200 words, of its contents.

10. Translate:— 30

(a) *A famous horse which brought death to all its owners and became a proverb.*

Eum equum fuisse dicunt magnitudine inusitata, cervice ardua, colore phoeniceo, flava et comanti iuba; . . . sed eundem equum tali fuisse fato sive fortuna ferunt, ut quisquis haberet eum possideretque, is cum omni domo familia fortunisque omnibus suis ad internecionem deperiret. Itaque primum illum Cn. Seium, dominum eius, a M. Antonio capitis damnatum miserando supplicio affectum esse: eodem tempore Cornelium Dolabellam consulem, in Syriam proficiscentem, fama istius equi adductum, Argos devertisse; cupidineque habendi eius exarsisse; emissequ eum sestertiis centum millibus: sed ipsum quoque Dolabellam in Syria bello civili obsessum atque interfectum esse: mox eundem equum C. Cassium, qui Dolabellam obsederat, abduxisse. Eum Cassium postea satis notum est, victis partibus, fusoque exercitu suo miseram mortem oppetiisse: deinde Antonium parta victoria equum illum nobilem requisisse et, cum eo potitus esset, ipsum quoque postea victum atque desertum detestabili exitio interisse. Hinc proverbium de hominibus calamitosis ortum, dicique solitum: 'Ille homo habet equum Seianum.'

(b) *Numa had been promised in a vision that a sign of empire should be given him at sunrise on the following day. These lines show how the promise was fulfilled.*

Ortus erat summo tantummodo margine Phoebus;

sollicitae mentes speque metuque pavent.

constitit, atque caput niveo velatus amictu

iam bene dis notas sustulit ille manus:

atque ita 'tempus adest promissi muneris' inquit,

'pollicitam dictis, Iupiter, adde fidem.'

dum loquitur, totum iam sol emoverat orbem,

et gravis netherio venit ab axe fragor.

ter tonuit sine nube deus, tria fulgura misit—

credite dicenti—mira, sed acta, loquor.

a media coelum regione dehiscere coepit;

submisere oculos cum duce turba suos.

ecce levi scutum versatum leniter aura

decidit. a populo clamor ad astra venit.

tollit humo munus caesa prius ille iuvenca,

quae dederat nulli colla premenda iugo.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

## A. PROSE COMPOSITION

## 1. Translate into Latin:—

12

(a) He thinks that if our men refrain from battle until the height is occupied, an attack may be made on the foe from all sides at once.

(b) Far from accomplishing their purpose, they were themselves repulsed in many conflicts.

(c) They believed that their great numbers would prevent the flight of a few from being noticed.

(d) Every third day he asked me whether I could help him.

2. (a) Turn into *oratio obliqua* depending on a verb in a historic tense:—

12

Videtisne, milites, captivorum orationem cum perfugis convenire? abesse regem, exiguas esse copias missas, quae paucis equitibus pares esse non potuerint? Proinde ad praedam, ad gloriam properate, ut iam de praemiis vestris et de referenda gratia cogitare incipiamus.

(b) Turn into *oratio recta*:—

Sese tamen et amore fraterno et existimatione vulgi commoveri. Quod si quid ei a Caesare gravius accidisset, cum ipse eum locum amicitiae apud eum teneret, neminem existimaturum non sua voluntate factum, qua ex re futurum uti totius Galliae animi a se averterentur.

## 3. Translate into Latin:—

26

Pyrrhus, being a general of great skill, was invited to Italy by the men of Tarentum, to assist them against the Romans. Upon his arrival at Tarentum, he began to reform the manners of the citizens, with which he was greatly displeased, and to teach their soldiers the duty of enduring labours and despising dangers. The army being thus strengthened, he advanced with forced marches against the Romans and defeated them. But, although victorious, Pyrrhus lost so many of his own men in this engagement that he was greatly disturbed in mind. Thinking that another victory of that kind would ruin him, he immediately sent a messenger to Rome to ask for peace. But the Romans replied that it was impossible for them to grant the demands of Pyrrhus.

## B. GRAMMAR

4. Write and translate short sentences to show the use in Latin of—*licet, quin, interest*. 5.

5. How do you express in Latin—(a) a wish; (b) an unfulfilled condition in past time; (c) time within which? Give illustrations. 5.

6. Distinguish between:—*timeo ne* and *timeo ut*; *quidem* and *quidam*; *annon* and *neene*; *quisquam* and *quisque*. Give illustrative examples, which should be translated. 5.

7. Give the genitive singular and accusative plural of—*crus, crux, foedus*; the other degrees of comparison of—*dubius, gravior, praevidus*; the principal parts of—*scipio, expurgor*; the second person singular of the imperfect subjunctive of *morior*; and the genitive plural of the present participle of *perco*. 5.

## C. ROMAN HISTORY

*Answer THREE ONLY of the following questions.*

8. Show how the Senate was essentially the chief governing body of Rome. 10
9. Sketch briefly the course of the First Punic War. 10
10. Analyse the causes and effects of the Social War. 10
11. Write a biography of L. Cornelius Sulla. 10
12. What were the so-called Triumvirates? Give a short account of each of them. 10
13. Sketch briefly the foreign policy of Augustus, with special reference to his additions to the Empire. 10

## LINGUISTICS—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any FIVE questions.*

1. Discuss the theories put forth to account for sound change in general. What is meant by 'isolative' and 'combinative' sound changes?
2. Write a note on the evolution of the verb and of the preposition.
3. Briefly set forth the effects of linguistic contact. Illustrate your remarks by examples from *either* English *or* Bengali.
4. Explain and illustrate *either* Verner's Law *or* Grassmann's Law.
5. Discuss the phenomenon of linguistic conservatism.
6. Explain and illustrate:—glides, *i*-mutation, palatalization, diphthongs, back consonants.
7. What is meant by 'linguistic palaeontology'? How far may language be regarded as the expression of national characteristics?

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt THREE questions from GROUP A and TWO questions from GROUP B.*

## GROUP A

1. Classify the Bengali sounds according to the different operations of the vocal chord and the places of formation.
2. Give an exhaustive list of Bengali diphthongs with illustrative words.
3. What spelling reform would you propose to make Bengali spelling phonetic?
4. Write in phonetic script a dialogue in your own Bengali dialect, containing about 100 words, and specifying the locality of the dialect.
5. Explain the following terms and illustrate them from Bengali:—glide, epenthesis, assimilation, metathesis, haplology, syncope.
6. Draw a diagram to show the tongue position for vowels in Bengali.

## GROUP B

7. Mention the language families of India, giving a few salient features of each.
8. How can the Indo-European family be distinguished from the Semitic family.
9. Mention the modern languages belonging to the Indo-European family, giving the speech localities.
10. Mention the families to which each of these languages belongs:—Malay, Basque, Hungarian, Zulu, Flemish, Oriya, Santali, Peguan, Japanese, Assyrian, Sinhalese, Pashtu, Barbar.



## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer EITHER Question 1 OR Question 2 and any FIVE of the remainder.*

1. State the names of the Non-Aryan language families in India and discuss the question of their mutual relations (if any). How far have these Non-Aryan languages affected the Aryan languages of India? 20
2. How far do you think the practice of giving the seven *vibhaktis* of Sanskrit in our vernacular grammars justifiable? If you disapprove of this practice could you suggest a better alternative? 20
3. Discuss the power of making compounds in modern Indo-Aryan. Compare with Sanskrit. 16

4. Discuss the numbers 11, 16, 19, and 20 in Bengali (or in your own vernacular), giving comparisons from other modern Indian languages. 16
5. Write a note on the gipsy languages. 16
6. How far has Persian affected the modern vernaculars of India? How early can you trace its influence? 16
7. Discuss the position of the Dardic languages with reference to the Aryan languages. 16
8. State what you know about either the Rājasthānī-Gujarātī group or Eastern Hindi. 16
9. Write short notes on any FOUR of the following :— 16  
Lhandā, Dogrī, Sindhī, Kashmirī, Santālī, Brāhmī.
10. Write a note on Middle Indo-Aryan languages. 16

## VERNACULARS

### BENGALI

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		RAI JALADHAR SEN BAHADUR

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Give an idea of Tantriks and Tantrikism as this may be formed from Bankimchandra's sketch of the Kapālika. 10  
*Or*, Write a brief essay on the character of Kapāla Kundalā. 10
2. *Either*, Narrate briefly the circumstances which led to the overthrow of the principality of Kapilavastu by the King of Kosāla. 10  
*Or*, Compare as briefly as you can the story of Kamsa and of Vasudeva as given in the Ghata Jātaka, with what is said of them in the Śrīmad-Bhagavata. 10

3. Explain fully any two of the following :—

(a) আমাদের হিন্দুসভ্যতার মূলে সমাজ ; যুরোপীয় সভ্যতার মূলে রাষ্ট্রনীতি । 4

(b) সেই-যে অযুক্তিতে গ্রামবৃদ্ধেরা উদয়ন ও বাসবদন্তার গল্প বলিত, তাহারাই বা কোথায় ? 4

(c) সূত্রের চেয়ে ভাষা যেমন অনেক বেশি হয়, তেমনি তাঁহার উৎসাহের তুমুল হাত-নাড়া তাঁহার ক্ষীণকণ্ঠকে বহুদূরে ছাড়াইয়া গেল । 4

4. Explain with reference to the context two of the following :—

(a) সাজিলা রথীন্দ্রধন বীরআভরণে  
হৈমবতীস্থত যথা নাশিতে তারকে  
মহাস্বর ; কিংবা যথা বৃহন্নলারূপী  
কিরীটা, বিরাটপুঞ্জসহ, উদ্ধারিতে  
গোধন, সাজিলা শূর শমীবৃক্ষমূলে । 6

(b) যথা সিংহ সহসা আক্রমে  
গজরাজে, পুরি বন ভীষণ গর্জনে,  
গ্রাসিলা দাসেরে আসি রোষে বিভাবসু—  
বাস ধীর, ভবেশ্বর, ভবেশ্বর-ভালে । 6

(c) অশ্রু-জাঁখি বিধুমুখী ভ্রমে ফুলবনে  
কভু, ব্রজকুঞ্জ-বনে, হায় রে যেমনি  
ব্রজবালা, নাহি হেরি কদম্বের মূলে  
পীতধড়া পীতাম্বর, অধরে মুরলী । 6

5. Expand the idea in ONE of the following :—

(a) অমঙ্গলকে লোপ কর ; মঙ্গলকে ধরিয়া রাখা অসাধ্য হইবে, মঙ্গল সঙ্গে সঙ্গে লোপ পাইবে । অমঙ্গলের পার্শ্বে থাকিয়াই মঙ্গল মঙ্গল ; নতুবা মঙ্গল অর্ধশূন্য বাতুলের প্রলাপ । 15

(b) ধন বল, দলবন্ধন বল, বাণিজ্য বল, আর রাজনৈতিক স্বাধীনতা বল, সকল গিয়াও সমাজ বাঁচিয়া থাকিতে পারে ; কিন্তু যে সকল লোকের স্বার্থ ও ভাষা গিয়াছে, সে সকল লোকের স্বভাব সমাজ আছে, এ কথা বলা যায় না । 15

## 6. Translate into Bengali :—

15

Hospitality is a virtue for which the natives of the East in general are highly and deservedly admired; and the people of Egypt are well entitled to commendation on this account. A word which signifies literally 'a person on a journey' ('musāfir') is the term most commonly employed in this country in the sense of a visitor or guest. There are very few persons here who would think of sitting down to a meal, if there were a stranger in the house without inviting him to partake of it, unless the latter was a menial; in which case, he would be invited to eat with the servants. It would be considered a shameful violation of good manners if one abstained from ordering the table to be prepared at the usual hour because a visitor happened to be present. Persons of the middle classes in this country, if living in a retired situation, sometimes take their supper before the door of their house, and invite every traveller of respectable appearance to eat with them.

## 7. Write an essay on ONE of the following :—

20

(a) Joint Family System: What it is—is it strictly a joint family when the members mess together and live in the same house, but have each a purse of his own?—the advantages and disadvantages of a joint family—the conditions that are steadily undermining it—the remedies you suggest.

(b) Village life in Bengal—picture of an ideal village—the causes of the present degeneracy—the extent to which improvements can be effected.

(c) জগতের ইতিহাসে মানবের পরমপূজ্যগণ দুঃখেরই অবতারণা।

Examples from History in support of your observations.

## 8. Re-write the following after correction, if necessary :—

10

(a) পাটনায় প্রায় দুইশত ইংরাজ বণিকদিগের হত্যা সমরুর চরিত্রের উজ্জল কলঙ্ক।

(b) তোমরা শুনিয়া আশ্চর্য হইবে যে, এক্ষিমো রমণীরা বিড়ালের গায় জিত্‌ দ্বারা চাটিয়া সন্তানের শরীর পরিকৃত করে।

(c) সহস্র সহস্র মহাত্মাগণ স্বদেশের মঙ্গলসাধনার্থ সময়সাগরে প্রাণ আহুতি দিয়াছেন।

(d) যে রেখা সপ্তর্ষিমণ্ডলের দুইটা নক্ষত্রকে সংযুক্ত করিয়া উপরদিকে বঙ্কিত হইলে অতি দূরে আর একটা উজ্জল নক্ষত্র স্পর্শ করে বলিয়া বোধ হয়, সেই নক্ষত্রটির নাম ধ্রুব।

## ALTERNATIVE PAPER IN BENGALI

*Paper-setter*—DR. MUHAMMAD SHAHID ULLAH, M.A., PH.D.

*Examiner*—DR. MUHAMMAD SHAHID ULLAH, M.A., DR.ES.L.(PARIS)

*Candidates are required to give their answers in standard Bengali in their own words as far as practicable.*

## GROUP I

HISTORY OF BENGALI LITERATURE: 45 marks

*Select any THREE questions from this group.*

1. What is meant by 'Gruḍiya Yuga'? Why has it been so named? Briefly describe the Bengali literature of this period under different appropriate heads.
2. Write fully what you know of Kṛttivāsa. Discuss his age.
3. Give a brief history of the Manasā cult, and narrate briefly the legend connected with it. Write short notes on the poets of the Manasā legend during the fifteenth and sixteenth centuries.
4. Briefly discuss the problems connected with the poet Chaṇḍidāsa.
5. Describe the gradual changes in Bengali prose style during the last century, mentioning the principal authors of this period.

## GROUP II

BENGALI PHILOLOGY: 25 marks

*Answer any TWO questions from this group.*

1. Describe the geographical distribution of the different groups of the Modern Indo-Aryan languages.
2. Describe accurately the vowel sounds of Bengali. Are the present letters of the alphabet sufficient to represent them?
3. Write philological notes on the following affixes :—  
 গুলি, এর, এর, এ, দিগের ।
4. Mention the various kinds of *samāsas* in use in genuine Bengali, and give examples.

## GROUP III

ESSAY IN STANDARD BENGALI: 30 marks

Write an essay on any ONE of the following subjects :—

- (a) True patriotism and fake.
  - (b) War.
  - (c) The study of poetry.
  - (d) 'It is better to be a human being dissatisfied than a pig satisfied.'
  - (e) 'Fame, that last infirmity of noble mind.'
  - (f) Non-violence.
-



## HINDI

*Paper-setter*—MR. NALINIMOHAN SANYAL, M.A.

*Examiner*—MR. LALTA PRASAD SUKUL, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer TWO of the FIRST FOUR questions and ALL the remaining ones.*

*The answers are to be worded in Hindī, unless otherwise directed.*

1. (a) Did Bhāratendu have any idea in view in putting *Kharibolī* in the mouths of some of the characters of his *Chandrāvalī Nāṭikā*, and *Brajabhāshā* in those of the others ? 9

(b) Compare the nature of the devotion of Chandrāvalī with that of Śrī Rādhā. 5

2. How do you characterize the प्रेम of the Gopikās ? Is there anything objectionable in it ? If so, how is it that devout Vaishnavas have not only approved but also admired it ? What is the inner significance of the relation between the Gopis and Śrī Kṛishṇa ? 8

3. In a poem of Surasāgar, Rādhā is represented as bewailing the inability of her eyes to deserve the epithet commonly applied to them of being mad after beauty ( रूपरसिक लालची कहावत ). Does the standard of beauty in सौन्दर्योपासक seem as lofty as that Sūrdās had in view ? Discuss this fully by referring to some of the incidents in सौन्दर्योपासक । 8

4. Explain fully what is meant by रस in literature. Enumerate the *rasas* recognized by Alāṅkāra Śāstra. Under what category would you place वाक्पत्य-रस ? What chords of the reader's heart are touched by the *Ajodhyā Kāṇḍa* of Tulsīdās's *Rāmāyaṇ*, by the tenth canto of Surasāgar, and by the *Śivā Bāwani* of Bhūshan ? 8

5. Give the substance of the following in very simple idiomatic Hindi :— 15

प्रत्येक मनुष्य चाहे छोटा ही या बड़ा, ईश्वर से सम्बन्ध रख सकता है । सूर्य के अभाव में दीपक और खदीत भी थोड़ा-बहुत प्रकाश करते ही हैं । यद्यपि कुछ लोगों के कथनानुसार ( जो किसी चरित्र में ठीक भी है ) आज-कल के छायावादों "जूठी पतल चाटकर" काम चलाते हैं, तथापि उस दिव्य भोजन को जूठन भी नायिका-भेद और नख-शिख के विलासमय कुक्षित भोजन से श्रेष्ठतर है । जूठा मोठे के लिये खाना चय्य माना जा सकता है । नायिका-भेद के अनुकरण में तो मोठे का भी स्वाद नहीं है ।

6. Translate into Hindi :—

15

We all make mistakes, and when those mistakes result in injustice or cause pain to others, it is our plain duty not only to express regret,

but to make amends for the wrongs we have done. When we fail to do this, we forfeit our claim to the title of gentlemen, however, high in life we may be placed. A gentleman should never be ashamed to own that he is in the wrong. It is but saying 'I am wiser to-day than yesterday'. A gentleman is every inch a man—large-bodied, large-brained, and large-hearted, whom to know is to love, and to trust without stint and without limit.

7. (a) Write sentences to bring out the genders of FIVE of the following words :— 5

तारा, सन्त, गुनाह, अग्नि, पत्नी, ऋतु, बालू, सोच, तोता, दीमक ।

(b) Write sentences to illustrate the different meanings of the following words :— 6

कान, बान, चान, मान, जान ।

8. Write an essay on ONE of the following subjects :— 20

(a) Education : what it is—its object—comparative merits of literary, scientific, industrial, and commercial education for young India just now.

(b) Health : its connexion with cleanliness, good food, bodily exertion, and cheerfulness of mind—physical and mental labour supplement each other for a sound mind in a sound body.

(c) The need for a common language for India : English is now the common language—the benefits hitherto conferred by it—the present development of some of the Indian languages—should or should not one of them replace English? Which language would you suggest, and why?

9. Explain any THREE of the following extracts :— 24

(a) देख दिनहुँ दिन दूरि होई ।

घट न तेज बल मुखहि सोई ॥

नित नव राम-प्रेम-पनु पीना ।

बढ़त घरमदल मन न मलीना ॥

जिमि जल निघटत सरद प्रकासि ।

बिलसत बेतस बनज बिकासि ॥

सम दम संजम नियम चपासा ।

नखत भरत दिय बिसल अकासा ॥

(b) ऊँचे घोर मंदर के अंदर के रहन वारी

ऊँचे घोर मंदर के अंदर रहती हैं ।

कंद मूल भोग करें कंद मूल भोग करें

तीन बेर खातीं ते वै बीन बेर खाती हैं ।

भूषण सिधिल अंग भूखन सिधिल अंग

विजन खुलातीं ते वै विजन खुलाती हैं ।

भूषण भगत सिवराज बीर तेरे वास

भगन जगाती ते वै भगन जगाती हैं ॥

(c)

डोलनि बाँकी कुंगली ।

ब्रज बनिता नगसवकनैनी, बीनति कुसुम कली ॥

कमल बदन पर बिधुरि रह्यो लट. कुंचित मनहुँ चली ।

अधरबिंब नासिका मनीहर, दामिनि दसन डली ।

नाभि परस लौं रस रोमावलि, कुच जुग बीच चली ।

मनहुँ विवर तेँ उरग रिंग्यो तकि, गिरि के संधि थली ॥

(d)

कठिन दरद कीज नहिं हरिहरे, धरिहरे, चरुटी नाज' ।

यह तो जो जानै सोइ जानै, क्यों करि प्रगट 'भनाज' ॥

रोम रोम प्रति नैन अवन मन, केहि धुनि रूप लखाज' ।

बिना सुजान शिरोमनि रौ केहि. हियरो कादि दिखाज' ॥

## URDU

Paper-setter—MAULVI A. F. M. ABDUL KADIR, M.A.

Examiner—KHAN BAHADUR REZA ALI WAHSHAT

*Candidates are required to give their answers in their own words as far as practicable.**The figures in the margin indicate full marks.**All answers to be written in Urdu.*1. *Father*, Write a short comparative essay on Saudā and Mīr. 12*Or*, Give a brief account of Ghālib and discuss the style of his poetry.2. *Father*, Justify the following statement appearing in the *Āb-i-Hayāt* :— 8

دھرم ران ہندو سالہا سال تک ملیکش بہاشا سمجھکر غیر زبان سے متنفر  
 رہے مگر زبان کا قانون دھرم اور حکومت کے قانون سے بھی سخت ہے کیونکہ  
 اسے گہری گہری اور پل پل کی ضرورتیں مدد دیتی ہیں جو کسی طرح  
 بند نہیں ہوتیں \*

*Or*, Give an account of Amīr Khusrau's contribution to the Urdu language.

3. Explain any four of the following lines :—

20

(۱) روشنائی سے ہوئی روشنیء خلوت فکر

جز قلم اور مری بزم میں مصباح نہیں

- (۲) شمارِ سبکہ مرغوب بت مشکل پسند آیا  
 تماشائے بیک کف برین صد دل پسند آیا  
 (۳) گروان نہیں پہ ران کے نکالے ہوئے تو ہیں  
 کعبے سے ان بڑوں کو بھی نسبت ہے دور کی  
 (۴) وہ زندہ ہم ہیں کہ ہیں روشناس خلق اے خضر  
 نہ تم کہ چور بنے عمر جاودان کے لئے  
 (۵) رہا بلا میں بھی مبتلائے آفتِ رشک  
 بلاے جان ہے ادا تیری اک جہان کے لئے  
 (۶) اڑتا ہے شوقِ راحت منزل میں اسپِ عمر  
 مہمیز کسکو کہتے ہیں اور تازیانہ کیا

4. Amplify the idea contained in any two of the following lines :—15

- (۱) فلک دیتا ہے جنکو عیش انکو غم بھی ہوتے ہیں  
 جہاں بچتے ہیں نقارے رھاں ماتم بھی ہوتے ہیں  
 (۲) مرافقت کی توقع ہے مجھکو عالم سے  
 نہیں ہے دھرم میں میرے سوا عذرِ میرا  
 (۳) ذرا دیکھ اسکو جو کچھ ہو رہا ہے ہرنے والا ہے  
 دھرا کیا ہے بھلا عہد کہن کی داستانوں میں  
 (۴) اجازا ہے تمیزِ ملت و آئین نے قوموں کو  
 مرے اہل وطن کے دل میں کچھ فکرِ وطن بھی ہے

5. Form sentences containing any FIVE of the following idioms :—10

- (۱) ناک میں دم آنا (۲) جان پر بندجانا (۳) کیا پیچھنا  
 (۴) بہرم کھل جانا (۵) جان میں جان آ جانا (۶) اچھی کہی  
 (۷) کیا کہے

6. Translate into Urdu :—

15

Caesar returned to Rome by the end of July. Great apprehensions were entertained by his enemies lest, notwithstanding his former clemency,

he should imitate Marius and Sulla, and punish all his opponents. But these fears were perfectly groundless. A love of cruelty was no part of Caesar's nature; and with a magnanimity which victors rarely show, he forgave all who had borne arms against him. His object was now to allay animosities and to secure the lives and property of the citizens of his empire.

7. Write a short essay on any ONE of the following subjects:— 20

- (a) Literature as a means of shaping a people's life.
- (b) The part Science has played in the Universe.
- (c) The poetry of Iqbāl.

## ALTERNATIVE PAPER IN URDU

*Paper-setter*—KHAN BAHADUR REZA ALI WAHSHAT

*Examiner*—PROF. MUHAMMAD ZUBAIR SIDDIQUI, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

N. B.—Answers to be written in Urdu.

1. Write a short account of any one of the following poets:—Jur'at, 25  
Mushāfi', Inshā.

2. Explain any FOUR of the following lines:— 20

(۱) مرے بخت ہیں وہ روکش کہ وہ دے جو وعدہ شب

تو پہنچکے تا بمغرب پھرے آفتابِ اُلتا

(۲) منظورِ درستی جو تمہیں ہے ہر ایک سے

اچھا تو کیا مظائقہ انشا سے کیسے سہی

(۳) مزا یہ دیکھو گا شیخ جی رُکے اللہ

جو اُنکا بزم میں کل احترام میں نے کیا

(۴) یہ ہمت جس سے شکلِ کافر شیریں بذائی نہی

اُسی نیشے سے پھر آخر کو کارِ کوہن بگرا

(۵) چشمِ کم سے نہ نظرِ مصحفی خستہ پہ کر

وہ اگر آیا تر مجلس میں نظیری آیا

(۶) یہ عجیب ماجرا ہے کے بروزِ عید قرآن

وہی قتل بھی کرے ہے وہی لے اُوب اُلتا

3. Describe the part played by the Fort William College in furthering the cause of the Urdū language. 2

4. Write an essay on any ONE of the following subjects:— 30

(a) Urdū journalism in India.

(b) The need for more extensive technical education.

(c) Poverty of the masses in India: causes and remedy.

## ASSAMESE

*Paper-setter*—MR. BANIKANTA KAKATI, M.A.

*Examiner*—MR. AMBIKANATH BORAH, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Assamese the following passage:— 15

When a naturally fine and noble mind is enlightened and fashioned by education, then there is manifested something inexpressibly beautiful, something unique. . . . These men would never have devoted themselves to the study of letters, had not their appreciation and practice of virtue been thereby quickened. And even if no such result as this could be pointed to, and if delight were the sole incentive to study, even yet, methinks, you must regard this form of mental activity as peculiarly humanizing and mind-broadening. For other delights must have their own times and seasons and circumstances. But these studies inspire youth and delight age: they are an ornament in prosperity, a refuge and a solace in adversity; at home they charm us, in public they are no burden; through the night hours they are our companions; whether we travel or are afar in the country, they are with us always.

2. Translate the following passage into modern Assamese:— 10

নবনাৰায়ণ ৰাজাৰ ভাই গুৰুধ্বজ কুমাৰ। তান পুত্ৰ বঘুনাৰায়ণ।  
নবনাৰায়ণ ৰাজা হৈ আছিতে গুৰুধ্বজ পুত্ৰ বঘুনাৰায়ণে নগৰৰ বাজ হৈ  
আপোনাৰ বাহুবলে ৰাজা হয় কামৰূপত। আজাৰা গ্ৰামত নিলানদী তীৰে  
বিজয়পুৰত নগৰ পাতি ৰহিল। নবনাৰায়ণে যুজিবাক মনে সাজি গল।  
পাচে বঘুনাৰায়ণে আপোনাৰ যত মহাদৈ আছে সবাকো ঘোঁৰাত তুলি হাতে  
ধনু ধৰাই সমুখে পঠানে। নবনাৰায়ণে বোলে “পুত্ৰ বধুসকলেহে যুদ্ধক আহে”।  
ৰাজা লজ্জা হয় উনটি গল, ধন-কাদল নহল। তাত পাচে দুয়ো ৰাজা মৃত্যু  
হল।

3. *Either*, Discuss the dramatic technique of an Assamese *bhāṇā*. 15

*Or*, Describe the character of Rukmīṇī.

4. *Either*, Estimate the influence of Śāṅkar Deva on early Assamese literature. 15

*Or*, Characterize the author of *Keteki* as a descriptive poet.

5. Explain with reference to the context any TWO of the following passages :— 15

(a) কৃষ্ণক আনিতে কোন চিন্তা থিক। তপক মহিমায় আকাশক  
বাজ্র আনি দিতে পাৰি।

(b) পিতৃৰ পুত্ৰৰ দেখা তেহুয় পৰায়ী।

(c) সি প্ৰেম গীতত বুঢ়া লুইতৰ  
লুলি উঠে কৌণ গা।

6. *Either*, How is the Passive sense expressed in Assamese? 10

*Or*, How is the denominative verb ( নামবাচু ) conjugated in Assamese?

7. Write an essay on ONE of the following subjects :— 20

- (a) 'An institution is the lengthened shadow of one man.'  
(b) The cause and cur. of unemployment in Assam.

## NEPALI

*Paper-setter & Examiner*—PANDIT DHARANIDHAR SARMA, B.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Which one of the जीवनचरितनामक essays in the प्रबन्धरचना शिक्षा दीर्घा भाग appeals to you most, and why? Give the main points contained in it in simple and correct Nepali. 10

*Or*, Write what you know of ब्रह्मचारीको नियम and ब्रह्मचर्यको माहात्म्य. 10

2. How and when did the meeting of बिक्रम and उर्वशी take place? How and why did they separate, and what brought about their re-union? 10

3. Explain clearly in your own words in simple Nepali and state the speaker and the person referred to :— 10

(a) मज्झिमा रत्न सदाएकौ मणि पारखीकी दिलमा बुझ न सकिँछौं निज रस न भए  
पछि प्याराकी ग्रथकडौं लीलोपोतोकी परिपठ पनी खाँची मानिसको मनले खाँदैन।

(b) बर्षेचा पञ्च पीरको मारण होला भनी मनले ठानेकी त उल्टी पो भयीए ;  
मनले बगायकालार्ह धारकी उल्टी तर्न प्रलय परिजना बर्षेचा भनी धाउने मलाई चेन भएन।

4. Either, Use the following words in sentences of your own :— 10

टङ टङ, हाथीमुहाली, खल्ल परेर, धोकीफुकार, शेखी भार्गमा खलिपा ।

- Or, Fill up the gaps with appropriate words :— 10

ईश्वर हन् भन्ने जसको विश्वास छ ती—कहलाउंछन् । ईश्वर कै न भन्ने जसको विश्वास छ ती—कहलाउंछन् । जो—हन् तो सदाकाल—देखि चलाउंछन् । यसकारण उनीहरू भरशक्त—गर्दैनन् । यदि मैले पाप गरे भने भलाई ईश्वरले—दिने हन् भन्ने उतलाई—रहन्छ । जो—हन् उनीहरूलाई कसै देखि—रहदैन । यसकारण उनीहरू सदा पापकर्म—न् ।

5. Explain clearly only FIVE of the following :— 10

भोकी न भकारी ।

खाई न पाई हालाकी टीपीलाई ।

छेउ न टुप्पी ।

अन्धानीरुलाई चौसी न पुर्‍या ।

मामाकी घोडी मेरो हो हो ।

भिरकी चिन्डो उँधी न उँभो ।

धंजेकी संजे बेजेकी नाक ।

6. Either, Amplify the idea contained in the following :— 15

उदर अनलबावा लाई केही न गन्दै ।

धन जन सब च्याँछे छोरे छे कृष्ण ! भन्दै ॥

हिमगिरि तिर ठाउँ हानिई यो पसेका ।

गिरिधर ! किन यत्ता आज धिक्कन् खसेका ॥

Or, Expand the statement जननी जन्मभूमिश्च स्वर्गादपि गरीयसी into a readable paragraph. 15

7. Translate into Nepali :— 15

The main story of the *Rāmāyana*, as related in the five original books, tells how, through the machinations of one of the wives of king Daśaratha of Ayodhyā, his eldest son Rāma goes into exile, accompanied by his wife Sītā and his brother Lakshmana, in the Daṇḍaka forest. Subsequently his younger brother Bharata comes to offer him the succession, but failing in his object returns to the capital. Rāma then sets about the task of clearing the forest of the gigantic demons infesting it, and slays many thousands. Their chief, Rāvaṇa, determined on revenge, succeeds during Rāma's absence in carrying Sītā off by force to the island of Laṅkā. Discovering through the chiefs of the monkeys, Hanuman and Sugriva, the locality where she is confined, Rāma with their help leads his army across from the mainland to Laṅkā, slays Rāvaṇa, and recovers Sītā.



8. Write an essay in Nepali on any ONE of the following subjects :—20

- (a) स्वार्थत्याग ।
- (b) *Either* बहुविवाह or बाल्यविवाह ।
- (c) वैवाहिक भङ्ग ।
- (d) बाघ लपथी चिन्ताउन रौडो लागी चिन्ताउन ।

## MAITHILI

*Paper-setter & Examiner*—KUMAR GANGANANDA SINHA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Explain, with reference to the context :—

20

(a)

*Either,*

प्रथमहि ओ री कुसुम रचित एक तलपहु ।  
 कौ अलपहु विरह बेचाकुल कल पहु ॥  
 तनि बिनु ओ री नयन बरिस जलधर सन ।  
 कौ परसन कति खन देत बिछि दरसन ॥  
 उपवन ओ री पिक पखन कर जनु सर ।  
 कौ अनुसर मार मदन धनि धनुसर ॥  
 सुनु धनि ओ री सुमति उभापति भन मत ।  
 कौ धनमत सुपहु मिलत रस जनमत ॥

*Or,*

अरुन पुरुष दिसि बहलि सगरि निसि  
 गगन मगन मेल अन्दा ।  
 मुनि गेलि कुमुदिनि तइओ तोहर धनि  
 मूलल मुख अरबिन्दा ॥

(b)

*Either,*

जराखिन्नु रूप धैरज देल ।  
 कटक बटोरक अटकल मेल ॥

खीरठ भीरठ भीं गढ़पाल ।  
 बंग बंग तेलंग नेपाल ॥  
 बेलिचा तिरहुति चभीर जत देस ।  
 वृपति हकारल सकल नरेस ॥

Or,

एक दिन गोकुलपुर चौथा ।  
 हय रुप घर पहुँचल मुँह चौथा ।  
 भट भट चीठ जीह लए चाट ।  
 खट खट खुर लए मेदगी काट ॥  
 धएलक तरह जेहन गोट धौक ।  
 गोट एक गोप कएलक टंगभौक ॥  
 जपबह रुद्र भखब हम रुद्र ।  
 घोड़ कुदए ने बाखर कूद ॥

2. Either, Give a graphic description of यवनपुर as indicated by Vidyapati in his *Kirtilātā*. 20

Or, What is your estimate of Jivana Jhā as a dramatist? Illustrate with quotations from his *Sāmavalīpunarjanna Nāṭaka*.

3. Translate into Maithili:—

15

The battle of the Nile had great consequences. Not only did it prevent Tipā Sahib in India from obtaining any further help from the French, and give the British control of the Mediterranean, but it encouraged the formation of another coalition of European powers against France. The insolence and aggressiveness of the foreign policy pursued by the French Government had roused the Czar; and Austria and Turkey also joined in the coalition. Affairs at first looked very promising. The French were almost driven out of Italy, while the British had in 1798 taken Minorca and blockaded Malta. The British, freed from entanglements in the West Indies by the Treaty of 1798, . . . , again sent an army to Holland under the command of Duke of York. Thanks to Lord St. Vincent an efficient system of blockading the great French port of Brest was adopted.

4. Amplify in Maithili the idea contained in the following passage:—  
 "Life is death, and death (of the ego) is the message of eternal life." 15

5. Construct sentences in Maithili to illustrate the use of चजवाड़व, चब छी, बेस, दरबाजा and पाक in as many different senses as possible. 10

6. Write an essay in Maithili on ONE of the following subjects:— 20

(a) The earthquake: causes—previous records—scientific investigations—precautions—effects and reflections.

(b) 'Only that day dawns to which we are awake': explain—examine—illustrate—conclude.

## KHASI

*Paper-setter & Examiner*—MR. ROY ROWLAND THOMAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into Khasi:—

15

In this character of the Americans, a love of freedom is the predominating feature which marks and distinguishes the whole: and as an ardent is always a jealous affection, your Colonies become suspicious, restive and untractable, whenever they see the least attempt to wrest from them by force, or shuffle from them by chicane, what they think the only advantage worth living for. This fierce spirit of liberty is stronger in the English Colonies probably than in any other people of the earth; and this from a great variety of powerful causes; which, to understand the true temper of their minds, and the distinction which this spirit takes, it will not be amiss to lay open somewhat more largely.

2. Write an imaginary conversation in Khasi between an educated man and an illiterate person on the economic position of the Khasis. 10

3. *Either*, Write what you know about Job's chastisement of his wife for her advice. 15

*Or*, Write a short moral from the life of Job.

4. Write from *Ka Kitap Niam-Khein* about *either* *ka rukom hiar pateng*, *or*, *ka Kamai iap-duh*. 15

5. *Either*, Write what you know from *Ka Pomblang Nongkrem bad Ka Thang Syiem Sohra* about 'Ki shiphew ksing bad ki arphew hynniew sur ki ksing pomblang lane ki ksing Niam'. 15

*Or*, Write what you know from the same book about 'u Hynniew Dkhot'.

6. Write briefly from *Ka Niam jong ki Khasi* about 'Pynhiar synjat'. 10

7. Write an essay in Khasi on ONE of the following subjects:— 20

(a) The League of Nations.

(b) The White Paper.

(c) Whether India should emphasize higher or lower education.

(d) The problem of unemployment among the educated Khasis.

(e) Co-education in India.

## TAMIL

**Paper-setter & Examiner—MM. VEDANTAVISARAD N. S. ANANTAKRISHNA SASTRI**

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Questions 5 and 6 and any THREE of the remaining four questions.*

1. வலியறிதல், காலமறிதல், குற்றங்கடிதல்—இவ்வதிகாரங்களின் கருத்தையும் இவற்றால் தெரிந்து கொண்ட கடமைகளையும் விளக்கி எழுதவும். 15

2. அடியிற் குறிப்பிட்ட குறள்களின் பதவுரை தெளிவுரைகளை யெழுதவும் :— 15

(a) அரங்கினி வட்டாடி யற்றே நிரம்பிய  
நூலினிக் கோட்டி கொளல.

(b) செல்வத்துட் செல்வஞ் செவிச்செல்வ மச்செல்வஞ்  
செல்வத்து னெல்லாந் தலை.

(c) அறிவற்றங் காக்குங் கருவி செறுவார்க்கு  
முள்ளழிக்க லாகா வரண்.

(d) அறனறிந்து மூத்த வறிவுடையார் கேண்மை  
திறனறிந்து தேர்ந்து கொளல்.

3. அடியிற்கண்ட சொற்களின் பொருளை யெழுதவும்.  
(a) நனிநல்லர், (b) ஓற்கத்தின், (c) எண்பொருளாக, (d) வன்மை, (e) ஊக்கார், (f) இடைக்கண், (g) ஞாலம், (h) போற்றார்கள. 15

4. அடியிற்கண்ட குறள்களின் ஒன்றையொட்டி ஓர் நீண்டவியாஸம் எழுதவும் :— 15

(a) தம்மிற் பெரியார் தமரா வொழுகுதல்  
வன்மையு னெல்லாந் தலை.

(b) தன்குற்ற நீக்கிப் பிறர்குற்றங் காண்கிற்பி  
னென்குற்ற மாகு மிறைக்கு.

## 5. (a) மன்றெடுங்கழல் வந்துவணங்கிடப்

30

பன் நெடும்பகல் பாரளிப்பாயென

நின் நெடும்புதல் வன்தனை நேமியான்

தொன் நெடும்முடி சூட்டுகின்றனென்றார்.

(b) எனக்கு நல்லையுமல்லை நீயென்மகன் பரதந

தனக்கு நல்லையுமல்லை யத்தருமமே நோக்கின்

உனக்கு நல்லையுமல்லை வந்தூழ்வினை தூண்ட

மனக்கு நல்லன சொல்லினை மதியிலா மனத்தோய்.

இவ்விரண்டு பாடல்களின் வரலாற்றையும் அவற்றின் பதவுரை தெளிவுரைகளையும் எழுதுக.

6. Translate the following passage into Tamil:—

25

I have already written about the value of education. I have also said how education used to be imparted in the ancient days of our Munis and Rishis under strict discipline and supervision of the Sages. Education has been described as culture of human mind. We should consider education as the most pleasure giving thing on earth, and go on improving our mind from day to day. Not a day should pass without our learning something new. In a family, father and mother should teach their children, and elder brothers and sisters should take pleasure and pride in teaching their younger brothers and sisters—thus a whole family gets properly educated without much expense. Children learn quicker and better from their fathers and mothers, and their elders. The proper education of our people is the grandest duty in the world.

## ORIYA

*Paper-setter & Examiner—MR. MAHESWAR DAS, M.A.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into elegant Oriya any ONE of the following passages:—15

(a) The moral nature of man supplies him both with the motive and the regulative power, being in fact the governor, and lord, and legitimate master of the whole machine. Moral excellence is therefore justly felt to be an indispensable element in all forms of human greatness. A man may be as brilliant, as clever, as strong, and as broad as you please; and with all this, if he is not good, he may be a paltry fellow; and even the sublime which he seems to reach, in his most splendid achievements, is only a brilliant sort of badness. The first Napoleon, in his thunderous career over our western world, was a notable example of superhuman force in a human shape, without any real human greatness.

(b) The prosecution of the Bishops is an event which stands by itself in our history. It was the first and last occasion on which two feelings of tremendous potency, two feelings which have generally been opposed to each other, and either of which, when strongly excited, has suffered to convulse the State, were united in perfect harmony. Those feelings were love of church and love of freedom. During many generations, every violent attack of High Church feeling, with one exception, has been un-

favourable to civil liberty; every violent outbreak of zeal for liberty, with one exception, has been unfavourable to the authority, and influence of prelacy and priesthood.

2. Who is the heroine of the novel ଲଜ୍ଜା? Analyse different aspects of her character with definite instances. 10

3. Explain, with reference to the context, any THREE of the following extracts :— 15

(a) ମାନବତାବିମଧ୍ୟରେ କବିସ୍ତୂର୍ଣ୍ଣମଣି, ସେ ଯହିଁରେ ଦ୍ଵାଦେକେ  
ସେ ସୁନା ହେବ । ଆମେମାନେ ଯାହାକୁ ମାଜଡ଼ା ପଥର ବୋଲି  
ଗୋଡ଼ରେ ଆଡ଼େଇ ଦେଉଁ, କବି ଯେବେ ସେଥିରେ ଥରେ ଅନ୍ତୁଳି  
ସ୍ପର୍ଶ କରନ୍ତି ତେବେ ସେହି ପୁଣି ଆମମାନଙ୍କ ନିକଟରେ ମରକତ ମଣି  
ହୋଇ ଉପସ୍ଥିତ ହୁଏ ।

(b) ଅନନ୍ତ ଆକାଶ — ଅନନ୍ତ ବନ୍ଧୁମଣ୍ଡଳ ଉପରିଭାଗରେ ପିତୃ  
ଲୋକ ସରା, ନିଷ୍ଠାପ, ନିଷ୍ଠୁଳଙ୍କ ମାନବାତ୍ତାସକଳ ଦେବବିଗ୍ରହଧାରଣ  
କରି ସେ ସରାରେ ବିରାଜିତ ଅଛନ୍ତି । ଯେଉଁ ମାନବାତ୍ତାମାନଙ୍କ ପୁତ୍ରକନ୍ୟା-  
ମାନେ ଗୁଣବାନ୍, ବିଦ୍ଵାନ୍, ଯଗସ୍ତ୍ରୀ, ନିଷ୍ଠାପଗରିର, ସେମାନଙ୍କ ଆସକ  
ସର୍ବୋଚ୍ଚ ।

(c)	ଦେଶକାଳାଚୀର	କଳ୍ପନା ଅଚୀର
	ତଥାପି ସ୍ଵପ୍ନ	ଅଗ୍ରେ ପ୍ରତିଷ୍ଠିତ,
	ସୁଦୂରରୁ ଦୂର	ଚିନ୍ତା ଅଗୋଚର
	ତଥାପି ନିକଟୁ	ନିକଟ ଜନର
	ଅପୂର୍ବ ଅସ୍ପର୍ଶ	ଅଗଦ ଅରସ
	ତଥାପି ସୁସନ୍ଧ୍ୟା	ମହାନନ୍ଦ ରସ ॥

(d) ନିଜ ବର୍ତ୍ତମାନରେ ଶଙ୍କରାଦି ଦେବଗଣ  
ଅର୍ଚ୍ଚିତ ଚର୍ଚ୍ଚିତରୁ ପିତୃପିତାମହେ  
ସମସ୍ତି ବ୍ୟସ୍ତି ଅରିନ୍ଧ ରାଜାରୁ ରାଜପୁରୁଷ  
ପରାଉନ୍ତିରୁ ଏଭାବ ଜାଣେ ହୃଦୟେ ।

4. Either, Write a critical appreciation of **ଉପେନ୍ଦ୍ରବଞ୍ଚ** as given in ବିବିଧ ପ୍ରବନ୍ଧ ।

10

Or, Narrate the duties of a king as given in ନୀଳାଚଳ of ମଧୁସୂଦନ ଦାଶ ।

5. (a) Illustrate the use of the following expressions :—

6

ହଟ ଲଗାଇବା, ଓଲିଆରୁ ଗଳା, ଗାଣ୍ଡି ଛାଡ଼ିବା, ପାଲରେ ପଡ଼ିବା ।

(b) Expand any one of the following proverbs :—

6

(i) ଥିଲେ ବିରାଜନା ହଜିଲେ ମାଠ ; (ii) ଭୁଲଣୀ ଦୁରପଦ୍ରୁ ବାସେ ।

(c) Express, in suitable compounds, any four of the following expressions :—

6

(i) ପୁତ୍ର ଠାରୁ ନାହିଁ ବିଶେଷ ଯତ୍ନରେ ; (ii) ଚକ୍ରରେ ଚକ୍ରରେ ଯେଉଁ ଯୁଦ୍ଧ ; (iii) ପୂର୍ବରେ ଯାହା ଦୃଷ୍ଟ ହୋଇ ନାହିଁ ; (iv) ଚାହିଁ ଅନ୍ୟ ଗଣି ଯାହାର ; (v) ପ୍ରୋତ୍ସାହିତ ରତ୍ନା ଯେଉଁ ସ୍ତ୍ରୀ ।

6. (a) Re-write the following extract in elegant Oriya :—

ବଢ଼ି କହିଲେ, ନାହିଁ ଏ ରାଜାଙ୍କରେ କେହି ନୁହେଁ, ଏ ରାଜାଙ୍କର ବରଜଣିଆ ଜଣେ ପାଖଲୋକ । ବୀରରତ୍ନ ଯା ଶୁଣିଲା ଶୁଣି ଚିତ୍ତିଏ ଗୁମ୍ଫା ଖାଇଲେ କହିଲେ, ଏ କଥା ତ ମୋଦେହୁଣି ହେବ ନାହିଁ । ମୁଁ ରଜାପୁଅ, ରଜାପୁଅ ନ ହେଲେ ଆରକାହା ସାଙ୍ଗରେ ତ ମୁଁ ପଟ ପକେଇବି ନାହିଁ, ନିଜାନ୍ତ ରଜାଙ୍କ ରାଇବିରାଦର, ବିରାଦପୁଅ, କି ସାଆନ୍ତ ନ ହେଲେ ମୁଁ କାହିଁ ଅଇଲା ପାଖଲୋକଟା ସାଙ୍ଗରେ ଜମାରୁ ଖେଳିବି ନାହିଁ । ସେ ରାଜାଙ୍କ ମାଲସାଙ୍ଗରେ ଫରିଖେଲ ଖେଳିବାକୁ ନାହିଁ ସ୍ୱର୍ଯ୍ୟ ନାହିଁ କଲେ । ଏହିସମୟରେ ବଢ଼ି ବୀରମୁର୍ଖି ହୋଇ ବୀରରତ୍ନ ପାଖକୁ ଉଡ଼ୁଳି ଆସିଲେ, କହିଲେ—ଛାର ବନ୍ଦିହୋଇ ଏବେ ଟାଣ କାହୁଁ କଥା ମୁଁ ?

(b) Fill up the blanks in the following :—

6

—— ରାଜାଦେଶ ପାଲନକର, —— ଏହି ଅସି ଦ୍ୱାରା ——  
ମିରଛୁଇଦନ କରିବି । —— —— ଅଗତ୍ୟା ଜଣେ ଚଣ୍ଡାଳ ——

ସେହି ନିଷ୍ପତ୍ତି — କାର୍ଯ୍ୟରେ ପରିଣତ — । ଅନ୍ଧାର —  
 ଯଦିବେଳେ ଅତି ଦୁଃଖରେ ବହୁକାଳ — ପାଞ୍ଚାମୃତ —  
 ଉପସ୍ଥିତ ହୋଇ ଅର୍ଦ୍ଧରାତ୍ର — ରାଜପ୍ରାସାଦର ଅନ୍ତର୍ଦ୍ଧରରେ —  
 ବାଦନ କରିବାକୁ — । ଅମୋଗ — ଅସୁରମୟୁଧୁନି —  
 ଦିବ୍ୟାନନ୍ଦ ରସରେ ଅଭିଷିକ୍ତ — ପ୍ରାଚୀ — ବାଦକ —  
 ଅଶାନ୍ତ — ଯେ, ସେ ପ୍ରାଣାଧିକ — — — ଦୁନାଲ । —  
 ଦୁ ଅନ୍ଧ ରିଷ୍ଟ — ବେଗଧାରୀ ଦେଖି ଏକାନ୍ତ ସ୍ଥଳ — ବିସ୍ମିତ  
 ହୋଇ — କାରଣ — ; ଦିନୁ ସେ — ଉତ୍ତର କଲେ  
 — ।

7. Write an essay on any ONE of the following subjects :—

20

- (a) Town life and village life.
- (b) Village reconstruction.
- (c) Co-education, its advantages and disadvantages.

## MODERN TIBETAN

*Paper-setter & Examiner*—DR. SATKARI MUKHERJEE, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following passage into Modern Tibetan :— 40

Loyola had, as we have said, given evidence of the strength of his will in carrying forward, through a period of six years, the plan which he had formed for his personal improvement ; and the necessities to which during these years of study he had submitted, severe as they were, had had probably tried his constancy not nearly so much as did the repugnance of his own mind to occupations that were purely intellectual. A conquest of the animal nature is what many have been equal to ; but to contravene the mental bias, and to control the tastes, is a victory which very few ever achieve. In this instance it appeared that the man who was born to govern others had established his title to do so by first showing that he could absolutely govern himself, and that he could do so on ground the most difficult.

This faculty of governing others, and this fascination, which gave him ascendancy over minds much superior in intelligence and in accomplishments to his own, undoubtedly belonged to him in an eminent degree. It is certain that he knew how to draw around himself persons of rank and education, as well as the vulgar. There was a charm in his personal appearance and demeanour ; there was an animation and fire, subdued by humility and suavity ; and above all there was an undeviating intensity of



movement, directed toward a high-raised object, which drew all sensitive minds into his wake.

2. Write an estimate of the literary value of the *Ho-wa-zañ-mo*. 10

3. Give a brief account of the principles of conduct which appeal to you most among those expounded in the anecdotes of the Buddha's life recorded in the *Pag-sam-ñi-sin*? 15

4. Conjugate any THREE of the following roots in the past and future tenses and in the imperative mood, and give illustration of any ONE form of any ONE root :— 10

རྒྱལ་བ་; འཇགས་པ་; གཡོག་པ་; གཞོད་པ་; འཚམ་པ་।

5. Write a short essay in Modern Tibetan on any ONE of the following :— 25

(a) The impact of modern civilization and its effects on the old ideals of life.

(b) The salient features of Buddhist culture in Tibet and their adaptability to modern conditions.

(c) The need of reforms, social and political, in the present state of Tibetan life.

## PORTUGUESE

*Paper-setter & Examiner*—DR. P. D. BRAGANCA CUNHA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Discuss the poetry of Anthero de Quental, and show how the spirit of freedom influenced his poems. 40

2. Say what you know of Herculano's prose. In what way was he the pioneer of the Romantic School? 30

3. Write a short essay on the influence of the French School in the works of Eça de Queiroz. 30

## KANARESE

*Paper-setter & Examiner*—MR. P. APPAJI RAO, B.Sc.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay in Kanarese on any ONE of the following subjects :—20

(a) Slaughter of animals—for religious purpose—for human consumption—for economic purposes.

(b) Earthquakes—their evil effects—their aftermath for improvements.

(c) The value of Insurance Companies—life—fire—accident, motor, theft and burglary.

- (d) Threat—a means to an end.  
 (e) Harijans and their future.

2. Translate into Kanarese :—

15

Players in all sports automatically adopt a more understanding and tolerant attitude to mistakes than a crowd which backs or bets but does not play, for they realise that if the game is in charge of a competent official errors of judgement are committed unwittingly and without prejudice. No one attacks the integrity of the referee. No instance has been brought to light of an official having deliberately 'sold' a game or consistently penalized a player because he did not like his habits or face. Referees are chosen after due care has been exercised to see that they know the rules, even to twisted interpretations that may be placed upon them, and after they have been instructed how to deal with every possible emergency that may crop up. They go on to the field, into the umpire's chair, or to the wickets, fully equipped for their work. Human frailty sees to it that they shall not be perfect, and these imperfections goad all that is partisan in the players and more especially in the spectators. That a referee has delighted a section of the crowd by an error which has benefited their interests does not soften their wrath when those interests are jeopardized, even for a moment, by the next mistake.

3. Who is Subhadra? Write all you know about this person. 10  
 4. 'Rāja Bhaktikāvya.' Name the principal characters and describe those you like best. 10  
 5. Rāma performs Asvamedhayāga and why. 20

6. Expand the ideas contained in the following.— 15

భరతదలి వృద్ధదలి కావ్యసు ।  
 విరజితాలంకారదలి గజ ।  
 తురగలక్షణదలి సమాహితమంత్ర తంత్రదలి॥  
 సరసకవితారజనీయలి వి ।  
 స్తరదు వన్యసదలి భూవతి ।  
 కరసి నోడలి నమ్మనేందరు ద్విజరు తమతమగే॥

7. Write short sentences illustrating the use of the following :—

10

- (a) లూళిగమం.  
 (b) వివాసలు.  
 (c) తుమురు తుమురాగి.  
 (d) తోరగణ పూణ.  
 (e) హణశుత్త.  
 (f) గుజుగుజు.

## GUJARATI

*Paper-setter*—DR. I. J. S. TARAPOREWALA, B.A., Ph.D.

*Examiner*—MR. HARGOVIND DAS SETH

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

પહેલા ત્રણ તથા બીજા ફાઇપણ પાંચ પ્રશ્નોના ઉત્તરો આપવા.

1. નીચેના વિષયો પૈકી એક પર નિબંધ લખો :— 20

- (ક) હિંદુસ્તાનમાં અંગ્રેજી ભાષાનું સ્થાન.
- (ખ) સ્ત્રીસન્માન.
- (ગ) અધુરો ઘડો છલકાય ઘણો.

2. નીચલાંનો દુક સાર તમારા પોતાના શબ્દોમાં લખો :— 15

સાંજે થોડી મિનિટ દેશી દવાઓ ખનાવવાનાં એક મોટાં કારખાનામાં ગાળી: તેમાં અમુક ખાતામાં ફરતાં તો વાતાવરણ જ એવું વસાણામય અનુભવાયું. ઝટકાતાં, ચળાતાં કે ભરાતાં ઓસડીયાંની ઝણ અને હળવી કે કડક સોડમ એવી તો શ્વાસોચ્છ્વાસ સાથે એક રૂપ થઇ જવા લાગી, કે મને તો એમ જ લાગ્યું રોજ અહીં એક આંટો જો દઈ જાઉં, તો આ સોડમ જ એવી ગુણકારી ને અસરકારક લાગે છે કે તબિયતમાં જખરો, ઝડપી, અમૃત્ય સુધારે સહેજે થઇ જશે. અને જો એમજ હોય તો આ ખાતામાં કામ કરનારાં બધાં-મજૂરજી માંડી ઉપરીઓ સુધી-કંદી માંદાંજ નહિ પડતાં હોય ને ? ભગવાન જાણે.

3. નીચેના અંગ્રેજીનો ગુજરાતી અનુવાદ કરો :— 15

There has been a remarkable awakening in this country, the idea of Swaraj has penetrated to the remotest corners, and every community has accepted it as the natural goal of India's political aspirations. The political awakening has brought with it a new sense of social justice, a desire to rectify old wrongs and to remove inequalities. It has also aroused a higher sense of citizenship, of rights which one may claim from the state, and of duties which one ought to render to it. What is needed is that the citizen should realize that both the individual and the community find the opportunity to attain their best life and their fullest development only in securing the well-being of the whole nation.

4. પ્રેમાનન્દમાં હાસ્યરસ કેટલે અંશે જણાય છે તે “ સુદામા ચરિત્ર ”માંથી અથવા ‘કાષ્ઠ બીજ’ કાવ્યમાંથી દેખાડો. 10
5. નરસિંહ મહેતા તથા મીરાંની ભક્તિની તુલના કરો. એ બંનેની ભક્તિમાં ફરક શો છે ? અને તો ઉતારા આપી સ્પષ્ટ સમજાવો. 10
6. સામળ ભટ્ટની વાર્તાઓ તમને કેવી લાગે છે ? આ પ્રકારની વાર્તાઓ પરથી આપણને સામળના સમયનું સામાજિક જીવન સમજાય કે ? 10
7. મૃણાલવતીનો મુંજ પ્રત્યે હૃદયપલટો કેવી રીતે થયો ? 10
8. મુંજનો દિગ્વિજય ક્યારે અને કેમ પૂરો થયો તે વિગતે સમજાવો. 10
9. શ્રીયુત મુનશી ઐતિહાસિક કથાકાર (historical novelist) તરીકે કેટલે અંશે સફળ થયા છે તે દેખાડો. 10

## TELUGU

*Paper-setter & Examiner—DR. B. RAMCHANDRA RAU, M.A., PH.D.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following lines into idiomatic Telugu :— 20

Life

Is to some as a glass of wine  
To be greedily quaffed in one hurried draught  
To the dregs, and then, the glass renewed  
With vintage of a fresher brew  
Be it sweet or bitter.

To Another :

It is as a tapestry and he the weaver,  
Who dyes the warp in wondrous hues  
And weaves the weft in patterns gay,  
But Time fades the blue to grey, the mauve to lavender  
Making all colours look more soft and tender.  
And yet, there gleams a thread of gold, ageless and bold.

To Yet Another :

Life is a fine gay adventure  
And he sails on uncharted seas  
Dauntless while the tempest rocks and heaves  
His frail craft upon the foaming billows  
Of the seething sea. But he steers it  
With fearless faith to the unknown haven.

To All Others :

Life is but a ruthless automaton  
To which perpetually slaves they are,  
Like cogs in its wheels, from birth till death,  
Rotating day after day will-less, joy-less, soul-less,  
Mechanical, they toil, sleep, wake, beget and die;  
No waves of memory beat on the sandy shore of their  
span of time,  
Nor gleams of light shine on the dark recesses of their  
muddled mind.  
Like a herd of dumb driven cattle they cross  
The Rubicon betwixt life and death.

2. Write an essay in Telugu criticizing the opinions of Mr. Lakshmanarao on “ లలితకళలు ”. 20

3. Comment on the heroic qualities of Rāma, Sītā, and Lakshmana as displayed by them in their *Vanava-samu*. 20

4. ఈ క్రింది పద్యము యొక్క తాత్పర్యము వ్రాయుడు :— 20

నీతి పథంబునన్ బ్రదుక నేర్పుట యుత్తమ భంగి శౌర్య సం  
జాతములై కరం బలరు సంపద లొందుట మధ్యవృత్తియ  
స్ఫీతములైన భారవహజీవనముల్ దలపంగ నిష్ఠముల్  
నీతికి బాహ్యులైన ధరణీ వల మెత్తురె వారి సుత్తముల్

5. Write an essay in Telugu on :— 20  
‘Truth and Freedom.’

## MALAYALAM

Paper-setter & Examiner—REV. C. E. ABRAHAM, M.A., B.D.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer Questions 1 and 2 and any other THREE.

1. Write an essay on ONE of the following subjects :— 32

- (a) Your favourite author.
- (b) Self-control.
- (c) The influence of Sanskrit on the vernaculars of India.

2. Translate the following passage into Malayalam :— 20

Yet with all its shortcomings and in spite of the many blunders which must be laid to the door of those, whether Europeans or Indians, who controlled the system, Western education cannot be called a failure when

it has produced an intellectual *élite* capable of playing such a part as it does to-day in modern India. It has shown that Indian brains, when given a fair chance, are no whit inferior to European brains. They have succeeded in wrestling with and overcoming the tremendous initial difficulty of learning everything through a foreign tongue. . . . The real wonder is the mastery of our language, and not only of our language, but of large fields of Western thought, which Western-educated Indians, many of whom have never left their country, display every day in public and official life, in lecture-rooms, on the Bench, at the Bar, in legislative and municipal assemblies. The proportion of those who come to England to complete their studies has steadily increased, but, even when they are most successful, much of the credit rightfully belongs to the Indian Universities in which they have first graduated.

### 3. മാർത്താണ്ഡവർമ്മയിലെ യുവരാജാവിന്റെ സ്വഭാവ

വൈശിഷ്ട്യം തെളിയിക്കുക.

16

### 4. മാർത്താണ്ഡവർമ്മയിൽ ഗ്രന്ഥകർത്താവ് എവിടെ

യെല്ലാം ഹാസ്യരസം പ്രദർശിപ്പിച്ചിരിക്കുന്നു?

16

5. കാവ്യലക്ഷണം, പുണ്യയാത്ര, എന്നീവിഷയങ്ങളെക്കുറിച്ച് രാസലസിൽ നിന്ന് എന്ത് പഠിക്കാം? അല്ലെങ്കിൽ, രാസലസിൽ പ്രതിപാദിച്ചിരിക്കുന്ന ഏതെങ്കിലും രണ്ടുവിഷയങ്ങളെക്കുറിച്ചുള്ള തത്വചിന്തകൾ ക്രോഡീകരിച്ച് എഴുതുക.

16

### 6. അർത്ഥമെഴുതുക :—

13

(a) ഭവദന്നമല ചരിത്രഗാന മാന്ദ്യം-

രിവന്നൊര 'പശ്ചിമി' യെന്ന കേട്ട പഠറി;

ധ്രുവമുടനവതാമുവും പിന്നെത്തു;

തവമതമിപ്പടിയോ? നഭശ ജായെ!

(b) നിരവധിമദമത്സരാദിയാദോ-

നിരകൾനിറഞ്ഞ ഭവാസ്തിയെക്കടപ്പാൻ

നിരയഭയ നിഹന്ത്രി! യാനപാത്രം

നിരമല ഭവൽപ്പദഭക്തി മാത്രമത്രെ:

7. ബധിരവിലാപത്തിൽനിന്നു കവിയുടെ കല്പനാശക്തി (Imagination) പ്രത്യക്ഷപ്പെടുന്നത്.

16

## MARATHI

*Paper-setter & Examiner—PROF. D. R. BHANDARKAR, M.A., PH.D.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay in Marathi on EITHER of the following:— 20
  - (a) The untouchable and depressed classes of Hindu society, and how to uplift them.
  - (b) Causes of the present financial stringency in India.

2. Translate into Marathi the following:— 15

But the most serious danger with which humanity is at present threatened, and which saps its spirituality away, is the ingenuity and device which endeavour to whet all the senses simultaneously when a single one is wanted to do its normal work. Suppose there is going to be a banquet with which the sense of taste is mainly concerned; for this purpose it is considered necessary that the remaining four senses should be given their fullest play. There must be in the dining-hall the most expensive and luxurious decorations, a medley of knick-knacks and trifles; there must be sweet strains of music to give tone and harmony to the surroundings. Rich fragrance of flowers and flavours of spices must not be left out. Every sense has to be gratified!

3. Describe briefly the important social institutions started by Dhondo Keshav Kärve. 10

4. Write a note on the philological peculiarities of the Marāṭhī language. 10

5. Either, What are the grounds and principles of *Nītiśāstra*? 10

Or, What are the main topics treated in the सुभाषित वाणि विनोद of N. C. Kelkär? 10

6. Explain in Marāṭhī the following, with reference to the context:— 20

(a) नारायणाचे ऊढ-स्पर्श'. उभौ होतौ नारायणापाशी'. तेंचि नांव भासि' तिसी । म्हणतौ ऊर्वशी स्वर्गांगना ॥

(b) दिवय्या छवी घोंडे । हें तो व-यांत न पडे ॥

आतां येथें पंढरि-राया । मज गोविंदी कासया ॥

तुका म्हण दिवा । माकें मोडवणे धांवा ॥

- (c) ချာတာံ တရီ ခဏိယ တုံ ဗလာ ဂီ ၊  
 ခရီ ခဏိယာ တုဂ ဂီဗ ခာဂီ ။  
 ခရီ တုလာ ခာဓတိ ခီဂ ခီဂီ ၊  
 ခာဏီ ဝဃာ နာယ ခဏ ခီဂီ ။

- (d) ပာဏုကာ ခဏိတ ခာဏိ ခာဏီ ။ ရာဏဗံဏ-ဗာဏာဏုဏီ ။  
 ခာဏီ ဂီဏ-ခီဂီ ခာဏီ ။ ခဏိယာ ရဏ-ဗာဏာဏီ ။

7. Amplify the following in Marāṭhī :—

15

- ပရီပကာရ န ခီလိ ၊ န ဂီရဗီ ခဏိယာဓိလိ ၊ န ခဏိ ခီကုံ  
 ခီဏိလိ ၊ ခီဂီဂီဓာဂီ ။  
 ခရီရ-ဗီဂါကဏိ ၊ ပာဏုတာံ နာဓာ ခာဓာ ၊ ဝဲ-ဗီဂီ ခဏိ-ဗီဓာ  
 ဝီဓီ ၊ ခဏ န နာဓာ ။  
 ခီဓာဓာ ခဏိဓာ ၊ ဝီဓာ ၊ ခဏိဓာ ဝီဓာ ၊ ခာဏ-ဗီဓီ ခဏိဓာ ၊  
 ဝဲ-ဗီဂီ ဝီဓာ ။

## BURMESE

*Paper-setter & Examiner—PROF. PE MAUNG TIN, M.A.*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. ဦးပုညသည် အဘယ်အကြောင်းများကြောင့် ကျော်စောသည်ကို ဆဋ္ဌန့်ဆင်မင်း ဝတ္ထုမြှူအထောက်အထားပြု၍ ဖြေပါ။ 10

2. အောက်ပါစာပိုဒ်တို့သည် မည်သည့် စာကိုယ်နှင့်စပ်ဆိုင်သနည်း။ ၎င်းတို့၏ အဓိပ္ပာယ်ကို သင့်စကားဖြင့် ဖော်ပြပါ။ 30

(က) ကျောက်စက်စမ်းကျ၊ ဗဟန်းမြဲနှင့်၊ ဝိဇ္ဇာဓာဓာ၊ သစ်ကွန်းတအုံ၊ ဂူနန်းသိုနှင့်၊ ဂရုဏ္ဏေ၊ မြေသယ်ဇာ၊ စုံကန္တာမှာ၊ ထုံမတ္တာမင်းကထိုင်တော့ထယ်။ ဘူမယိန်ဇယ်၊ ဣဇန်ဂြိုဟ်၊ သဲနန်းစပ်ကွင်း၊ မြေတလင်းမှာ၊ နေခင်းခယျ၊ မြတော့တနွန်း၊ အုံမယုံ၊ ဂမုန်းဧည့်လာ၊ နာဂိုးပြာနှင့်၊ လာတေလေကျောက်၊ ပြုမီးတောက်ထဲ၊ မောက်ကြက်နီဝါ၊ ဂရုသည်လမ်း၊ တည်တနန်းသို့၊ ဆန်းမူရာဇယ်၊ မြင်လာထိုက်တိုင်းရှိုင်းမိတယ်။



(ခ) တကာကြီးစကားကို၊ ခြောက်ပါးသမ္ဘန်၊ ထိန်အန်ဝေဝရပ်၊ ပဒုဒ္ဒါရ၊ ပဒပဝေ၊ ဥပဒေတို့ဖြင့်၊ မေးဖြေစစ်၍၊ အပြစ်ကိုရှာသော်၊ ရှင်ပုညာဘိဇေသည်၊ လောကကိုလိုက်စား၍၊ မင်းပါးမိုးခွင်၊ ထွက်ဝင်ရအောင်၊ ကြံဆောင်အားဆဲ၊ ငါတကာဆီသော်လည်း၊ မင်းပွဲသို့ ခဝင်နိုင်။ ခါတ်စုတ်တိုင်ယွင်းယို၊ ဇာတာတော်ညိုသောကြောင့်။ မိတ်လိုတိုင်းမပြီးဟု၊ တကာကြီးအတွေးနှင့်၊ စာရေး၍ပါသည်မှာ။

(ဂ) သမုဒ္ဒရာနှင့်နွားခြေရာ၊ ကေသရာနှင့်ဘားတလက်၊ ဝက်သားနှင့်ငါးပိပုတ်၊ တဲစုတ်နှင့်ရွှေခန်းဆောင်၊ နေရောင်နှင့်ပိုးရုန်းကြွေး၊ ထူရှူးနှင့်နတ်သား၊ ပတ္တမြားနှင့်မီးသွေးကျောက်၊ ထင်းပေါက်နှင့်ပျဉ်ယောင်၊ မြင်းမိုရ်တောင်နှင့်ဆီးစေ့မျိုး၊ ရွှေငှက်နှင့်ဖျဉ်ကြမ်းထည်၊ ထင်းရွက်သည်နှင့်လှေသူကြီး၊ ရွှေထီးနှင့်ခမောက်စုတ်၊ မှန်စီအုပ်နှင့်အိုးကင်းပွဲ၊ မဆိုင်တဲ့နေရာမှာ၊ အနာပေါက်ချက်မကျသကဲ့သို့။

3. ဆောက်ပါစာပိုဒ်၏အဓိပ္ပာယ်ကိုသင့်စကားဖြင့်ရေးပါ။ 15

နီလာမြသား၊ ဖြယားရတနာ၊ မလ္လာမကုသု၊ ဒုမ္မာရပန်းမိုင်၊ အဆိုင်အဆိုင်၊ ညှာပြိုင်ရုံးညို၊ ကုံးသီချယ်တန်၊ ထကန်ထကန်၊ ငှက်ခါးတောင်ဖြန့်သကဲ့သို့၊ စိမ်းပန့်ပန့်အဟွံ၊ ရွှေဝယ်ဆံ့မှ၊ ကုလုံမံရည်၊ ကြည်ကြည်အေးချို၊ ပန်းရက်ယိုသော၊ ကြာညိုတောထထပ်။ သန္တာနှုတ်ကျေး၊ ယုန်သွေးတရှိ၊ ကောဝိဋ္ဌာပွင့်၊ ဟွာဟွာရင့်သော၊ ကြက်မင်းဥသျှောင်၊ ဝန်းရောင်ထွင်ထွင်၊ လောယိတင်မထိရတ်၊ တွတ်တွတ်နီမြန်း၊ မင်သခန်းအသား၊ ပတ္တမြားကျောက်မွန်၊ သိန်းတန်သပြာ၊ ကမ္ဘလာရွန်းသပ်၊ တကျွန်းဖြစ်ဖြင့်၊ ဝန်းရပ်ပတ်ခြံ၊ ရံသကဲ့သို့၊ စက္ခုပိညာဏ်တည်းတူသောဝတ်ရက်ယူသတ္တဝါ၊ ငှက်ယိပ်ပြာတို့၏၊ နားရာပြီပြီ၊ ရှုစအိသော၊ ကြာနီထောတထပ်။

4. Translate into Burmese:—

15

I have often told you in my former letters that the strictest and most scrupulous honour and virtue can alone make you esteemed and valued by mankind; that parts and learning can alone make you admired and celebrated by them; but that the possession of lesser talents was most absolutely necessary towards making you liked, beloved, and sought after in private life. Of these lesser talents good breeding is the principal and

most necessary one, not only as it is very important in itself, but as it adds great lustre to the more solid advantages both of the heart and the mind. I have often touched upon good breeding to you before; so that this letter shall be upon the next necessary qualification to it, which is a genteel easy manner, and carriage, wholly free from those odd tricks, ill habits, and awkwardnesses which even many very worthy and sensible people have in their behaviour. However trifling a genteel manner may sound, it is of very great consequence towards pleasing in private life, especially the women; whom, one time or other, you will think worth pleasing.

5. ဦးကြင်ဦးရေသည်ရှေးဟောင်းကဗျာအဖွဲ့များမှာ ထီးနန်းနှင့်ဆိုင်သောအခန်းမှာထီးနန်းအမှုအရာ။ တောတောင်နှင့်ဆိုင်သောအခန်းအနားမှာတောတောင်ထိုးစိုက်။ အကွက်ဆိုက်ရာဆိုက်ရာကားသားပါ၍၊ အသုံးအနှုန်းတို့ကိုနည်းယူသင့်သည်ဟုတော်ပြထားရှိရာ၊ ၎င်းရေသောပဒေသာသီချင်းများကို အကိုးအကားပြု၍ထောက်ခံချက်ရေးပါ။

10

6. အောက်ပါအကြောင်းအရာထုတ်ဖော်စာတိုင်းရေးပါ။— 20

(က) မြန်မာဘာသာဖြန့်ချိခြင်း။

(ခ) မြန်မာနိုင်ငံဥပဒေပြုအဖွဲ့။

(ဂ) လက်မှုပညာ။

## ALTERNATIVE PAPER IN ENGLISH

*Paper-setter*—RAI LALITMOHAN CHATTERJEE, BAHADUR, M.A.

*Examiner*—MR. C. C. BISWAS, C.I.E., M.A., B.L.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. *Either*, Give Birrell's estimate of Matthew Arnold's poetry 15  
Or, Summarize Birrell's remarks on the actor's calling
2. Quote from memory *either* the words in which Gibbon tells us how the idea of writing the *History* came to his mind; or the words in which Johnson speaks of Garrick's death. 5
3. Write briefly, after Birrell, on two of the following:— 10
  - (a) Cowper as a letter writer.
  - (b) Pope as a satirist.

(c) Matthew Arnold's criticism of the British aristocracy, middle class and lower classes.

4. Give the context and *either* explain or comment on **FOUR** of the following passages :— 20

(a) Who but must laugh if such a man there be ?  
Who would not weep if Atticus were he ?

(b) You might scoop Gibbon's mind out of Burke's without missing it.

(c) 'To love her', wrote Steele, 'is a liberal education.' As much might surely be said of Shakespeare.

(d) We might be forgiven for liking the company of a live rogue better than that of the lay figures labelled with distinguished names.

(e) Of this liberty we can never be deprived even by a veto of authors *ad hoc* and the free exercise of it is a far more important constituent in the manufacture of literary opinion than printed notices of books.

5. Explain what you understand by Romantic Poetry, and illustrate your answer by quotations. 15

6. Give the substance of *either* Wordsworth's *ode to Duty*, or Keats's *The Terror of Death*. 7

7. Compare Keat's poem on the nightingale with Bridges's on nightingales. 8

8. Explain in the light of the context :— 20

(a) Like a poet hidden  
In the light of thought,  
Singing hymns unbidden,  
Till the world is wrought  
To sympathy with hopes and fears it heeded not.

(b) And oft by yon blue gushing stream  
Shall sorrow lean her drooping head,  
And feed deep thought with many a dream,  
And lingering pause and lightly tread ;  
Fond wretch ! as if her step disturb'd the dead !

(c) Fly with delight, fly hence !  
'Twas thine love's tender sense  
To feast ; now on thy bier  
Beauty shall shed a tear.

(d) To be a prodigal's favourite—then, worse truth,  
A miser's pensioner—behold thy lot !  
O Man ! that from thy fair and shining Youth  
Age might but take the things Youth needed not !

## HISTORY—HONOURS

<i>Paper-setters—</i>	{	DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.
		MR. PRAMATHANATH BANERJEE, M.A., B.L., BAR-AT-LAW.
		PROF. D. R. BHANDARKAR, M.A., PH.D.
		DR. A. POPE, M.A., D.LITT.
		MR. R. B. RAMSBOTHAM, M.B.E., M.A., B.LITT.
		PROF. SURENDRANATH SEN, M.A., PH.D. B.LITT.
<i>Examiners—</i>	{	MR. KRISHNADHAN BANERJEE, M.A.
		PROF. D. R. BHANDARKAR, M.A., PH.D.
		MR. BIPINBIHARI GUPTA, M.A.
		„ SUSOBHANCHANDRA SARKAR, M.A.
		„ K. ZACHARIAH, M.A.
		„ PRAMATHANATH BANERJEE, M.A., B.L., BARRISTER-AT-LAW.

## FIRST PAPER

## Modern Europe

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt FIVE questions only. At least ONE must be taken from each of the groups.*

## GROUP A

1. With the aid of the accompanying sketch-map—  
*Either, (a) Describe the dominions of Philip II in Europe.*  
*Or, (b) Illustrate the aims of Louis XIV of France.*  
*Or, (c) Give an account of the readjustment of the map of Europe by the Congress of Vienna.*
2. How far was the Reformation in Europe a political movement?
3. 'Gustavus Adolphus, Richelieu and Mazarin saved Protestantism from annihilation in the Thirty Years War.' Discuss.
4. To what causes would you attribute the success of the Turks in Europe? Assess their contributions to European civilization.
5. Account for the causes of the rivalry between France and Spain between 1500 and 1700 A.D.

## GROUP B

6. 'The reign of Louis XIV was an era of great brilliance for France which produced men of the highest eminence in almost every department of life.' Illustrate.
7. 'The House of Hapsburg has not produced any ruler who appeals so much to the sympathy and admiration of posterity as Maria Theresa.' Discuss.
8. 'The founder of the modern greatness of France, Henry IV was a man of three different epochs—the epoch of feudalism, the epoch of the wars of religion, and the epoch of benevolent despotism.' Expand.
9. Give an account of the policy of (a) Peter the Great, (b) Catherine the Great, towards (i) Prussia, (ii) Austria, (iii) Turkey.

10. Give a critical estimate of the historic services rendered to the Counter Reformation by the Jesuits. Why was their order suppressed?

#### GROUP C

11. Napoleon himself declared, 'The Duke of Wellington is fully equal to myself in the management of an army with the advantage of possessing more prudence.' Do you agree? Account for Napoleon's failure at Waterloo.

12. To what causes would you attribute the decline and the extinction of Poland as a sovereign state?

13. 'The dissolution of the Holy Roman Empire in 1806 is the work of Richelieu, Mazarin, Louis XIV. It was simply consummated by Napoleon.' Expand.

14. 'Concessions ruined Louis XVI', said Charles X of France. Do you agree?

15. 'I have come into the world', said Metternich, 'too early or too late; earlier, I should have enjoyed the age; later, I should have helped to reconstruct it.' Discuss. What is your estimate of the success achieved by Metternich?

#### GROUP D

16. 'The key-note of Bismarck's policy is to be found in his resolve to drive Austria out of Germany and make Prussia the leading power there.' What steps did he take to achieve his objects? What was the measure of his success?

17. Give an account of the scientific and intellectual developments in Europe in the nineteenth century.

18. 'The position of Great Britain at the close of the nineteenth century in international politics in Europe was one of isolation. It was described by some as 'splendid' and by others as 'dangerous'. Which of the views would you adopt, and why?

19. 'The Crimean War was the only perfectly useless modern war that has been waged.' Do you agree?

20. Comment on any two of the following:—

(a) 'Luther denies that Peter was the chief of the apostles; he declares that ecclesiastical obedience is not of divine right but that it was brought in by human appointment or that of the Emperor.' (*Eck's report on the disputation at Leipzig, 1519.*)

(b) 'I call on the all powerful God to witness by whose providence we are here assembled, that it is not by my own wish, or from any love of war, that I undertake this campaign. On the contrary I have been now for several years goaded into it by the Imperial party.' (*Gustavus Adolphus's farewell to Sweden, 1630.*)

(c) 'No law made by the Church should have the least force unless expressly sanctioned by the government. It was owing to this precaution that Athens and Rome escaped all religious quarrels.' (*VOLTAIRE: Philosophical Dictionary.*)

(d) 'Tyrants beset us without our borders; the friends of sympathy conspire within. In such a crisis the principle of our policy must be this: To govern the people by Reason and the enemies of the people by Terror. Terror is only justice more prompt, more vigorous, more inexorable, and therefore, virtue's child.' (*ROBESPIERRE.*)

(e) 'Glory to Allah there is no other God but God. Mohammed is the prophet and I am his friend. Mufties! the divine Koran is the delight of my soul and the object of my contemplation.' (*Napoleon Bonaparte in Egypt.*)

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Not more than FIVE questions are to be attempted.*

1. Describe the policy of George III towards the growth of Parliamentary Government in England.
2. 'The end of the American War of Independence saw a change in the mechanism of administering the Colonies.' Explain briefly the changes in (a) colonial, (b) Indian administration during the reign of King George III.
3. Discuss the terms of the Treaty of Versailles (1783), and criticize the Shelburne Ministry's handling of these negotiations.
4. Give some account of the secret political societies in Ireland between 1760 and 1798. For what purposes were they formed, and what measures were taken to suppress them?
5. Account for the failure of the Parliamentary Union between England and Ireland.
6. Describe the financial and political state of England in 1784, and criticize Pitt's measures of retrenchment as revealed in his Budget of June 1784.
7. What constitutional problems were involved by the question of the Regency (1788-9), and what political issues were at stake?
8. Describe briefly Pitt's foreign policy from 1784 to 1791. Account for the failure of his policy towards Russia.
9. What is meant by the Industrial Revolution?
10. Account for the decline of English agriculture during the second half of the eighteenth century.
11. Estimate the position and influence of the Crown in England, 1815-20 by reference to historical facts.
12. Write notes on any two of the following:—Jonh Wesley, Lord Shelburne, Lord Castlereagh, Lord Camden, Adam Smith.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Attempt FIVE questions only, of which at least ONE and not more than TWO must be from each group.*

## GROUP A

1. 'Unquestionably the most copious and important source of early Indian history is the epigraphic.' Justify or criticize.
2. Critically determine the place of Aśoka in history.

3. Indicate the importance of the Gupta epoch in the history of Hindu culture.

4. Is it true that the struggles for supremacy in the post-Gupta period were 'merely wars of crows and kites, in which no deep significance could lie'? Discuss.

#### GROUP B

5. Form a critical estimate of the rôle and character of Alâu-d-dîn Khilji based principally on the accounts of Ibn Batuta and Ziaü-d-dîn Barni.

6. Explain Akbar's military organization and discuss its efficiency.

7. What do you think of the religious activities of Akbar? Were they a monument of his folly or of his wisdom?

8. Sketch the life and estimate the work of Ranjit Singh, comparing him with Sivaji as a nation-builder.

#### GROUP C

9. Account for the failure of the French to establish an empire in India.

10. 'Lord Wellesley was one of the greatest of British rulers of India. Only Clive, Warren Hastings and Dalhousie can challenge comparison with him and in actual achievement he out-distanced them all.' How far do you agree with this estimate?

11. Discuss the causes, remote and immediate, of the Indian Mutiny of 1857, and account for its failure.

12. Who was, in your opinion, the greatest Governor-General of India after 1880? Give reasons.

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt FIVE questions only.*

1. 'Women played no part in the history of Athena's city.' Do you agree?

2. To what extent did the blunders and personal ambition of Pausanias contribute to the Spartan failure in achieving imperial domination?

3. Institute a comparison between Themistocles and Cimon as statesmen, patriots, and men of action.

4. Comment on or criticize—'Pericles ruled as absolutely as a tyrant and folk might have said that his rule was a continuation of the Pisistratids.'

5. 'Brasidas was a Spartan by mistake.' Amplify.

6. Discuss the terms of the Peace of Nicias and account for its failure to secure an abiding peace.

7. What light does the career of Alcibiades throw on the political and constitutional history of Athens?

8. How far was public opinion at Athens favourable to the growth of free-thinking and rationalism during the fifth century B.C.?

9. To what extent did the Greek colonies of your period resemble the self-governing dominions of the British Commonwealth in their constitution, commercial policy, and general attitude towards the mother state?

10. 'The Peloponnesian War has attained an undeserved celebrity in the world's history.' Do you agree?

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*FIVE questions to be attempted.*

1. 'The First Punic War proved to be a test of staying powers between a federation of autonomous peoples and a wealthy city which employed strangers or conscripted subjects to fight for her.' Discuss this statement. 20

2. Trace the growth of Rome's naval power, and describe the steps by which she became mistress of the Mediterranean Sea. 20

3. Account for the change in Roman rule in Italy after the Hannibalic War, and point out the far-reaching effects of this change. 20

4. Show how the acquisition of wealth and power affected Roman provincial administration. 20

5. What effect had the Spartan revolution under Cleomenes III on the Peloponnese? 20

6. Sketch in outline the external history of Rome between the Second and Third Punic Wars. 20

7. Write brief notes on any FOUR of the following:—the Achaean League, Mylae, Conference of Naupactus, the Ebro Treaty, Queen Teuta, Epicureanism, M. Porcius Cato, *Massiliote Periplus*, *Lembi*, Hamilcar Barca, *Bellum Punicum*. 20

8. Delineate briefly the part played by Ptolemy III in the Third Syrian War. 20

9. Give an estimate of Greek influence on Roman poetry and art. 20

10. What were the factors in Roman policy which led to the destruction of Carthage, and how did they influence her subsequent administration of the Province of Africa? 20



## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

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*The questions are of equal value.*

*Only SIX questions are to be attempted.*

1. Discuss any ONE of the following passages:—

(a) 'Religion was the one bond which united the Christian States, there was one Christian Europe with one single tongue, the Latin, and one single head, the Pope.'

(b) 'Far from the Middle Ages appearing to us as a period of decadence, ignorance, and barbarism, we admire in them a long and brilliant period of progress and revival. Modern civilization was being announced and prepared.'

(c) 'In the thirteenth century in truth, Europe was not merely a geographical expression.'

2. Discuss the origin and importance of Feudalism in the Middle Ages.

3. Sketch the career of Hildebrand (Pope Gregory VII) and discuss his ideal of Papal supremacy.

4. Describe the struggle between the Hohenstaufens and the Papacy. What were the causes which contributed to the defeat of the Empire?

5. Account for the failure of the Crusades. Discuss the vast social and intellectual upheaval induced by them.

6. Give a short account of the consolidation of the French monarchy from the time of Philip the Fair to that of Louis XI.

7. Enumerate the administrative reforms of the Plantagenet kings of England. Show how local self-government survived in spite of the growth of a strong monarchy.

8. Explain the evolution of the city-states of Italy. Describe the social and political life of Florence.

9. Describe the gradual emancipation of the peasants and bourgeois from the twelfth century onwards, with special reference to the guilds, municipalities, and the communes.

10. Write critical notes on any FOUR of the following:—(a) the University of Paris, (b) scholastic philosophy, (c) the Babylonish captivity of the Popes, (d) medieval Christian commerce with the East, (e) the military orders, (f) the feudal army, (g) the Republic of Genoa, (h) Moorish culture in Spain.

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## HISTORY—PASS

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		„ NIMAICHAND SIL, M.A.
		DR. KALIDAS NAG, M.A., D.LITT.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer SIX questions only, THREE to be taken from each group.*

## GROUP A

1. Explain the significance of the Renaissance on the history of modern Europe.
2. Describe the chief events in the reign of Philip II of Spain. What, in your opinion, were the causes of the decline of Spain?
3. Sketch the career of Richelieu. How did he promote the greatness of his country?
4. Write a note on the Catholic Reformation in Europe. What were its effective instruments?
5. 'In the seventeenth century and in the greater part of the eighteenth century, France, victorious in her struggle for dynastic aggrandizement on the continent of Europe, was destined to suffer defeat in her efforts to secure colonies in Asia and America'. Expand.
6. Give an account of the growth of Brandenburg-Prussia under the Hohenzollerns before the accession of Frederick II.

## GROUP B

7. What were the ideals of the 'enlightened despots' of the eighteenth century? Describe the activities of any two of them.
8. How do you account for the phenomenal rise and equally remarkable downfall of Napoleon Bonaparte?
9. Draw a map of Europe and indicate thereon the main changes effected by the Congress of Vienna, 1815.
10. Briefly describe the story of Italian Unity.

11. Explain the nature of the Industrial Revolution. How did it affect the economic, social, and political condition of continental Europe?

12. Describe the causes, progress, and results of the Russo-Turkish war of 1877-8.

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## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt only SIX questions.*

1. Write a critical estimate of the character and policy of George III. How far was he justified in calling himself 'a whig of the Revolution'?

2. 'The idea of the cabinet as a homogeneous body, collectively responsible to Parliament, was not yet established.' To what extent is this remark applicable to the reign of George III?

3. How far did the House of Commons reflect the feelings of the nation in the latter half of the eighteenth century?

4. What were the causes leading to England's rupture with France in 1793? What measures were adopted by Pitt (the younger) to check the spread of 'French principles' in his own country?

5. 'Walpole is of all English statesmen the one whom Pitt (the younger) most nearly resembled in the character and direction of the work which he preferred to do.' Discuss.

6. Estimate the influence of sea-power on the course of the Napoleonic Wars.

7. 'A corrupt aristocracy, a ferocious commonalty, a distracted government, a divided people'. Is this a correct representation of the state of Ireland in the closing years of the eighteenth century?

8. Estimate the influence of the Evangelical Movement on the social and religious life in England in the latter half of the eighteenth century.

9. 'The reign of George III was a period of fruitful energy in all the creative arts.' Explain.

10. Give an account of the condition of the labouring classes in the reign of George III, and review the attempts to alleviate their misery.

11. Write short notes on any FOUR of the following:—(a) the King's Friends, (b) the Letters of Junius, (c) Admiral Rodney, (d) John Howard, (e) the Peace of Amiens, (f) the Continental System, (g) Edmund Burke, (h) *The Wealth of Nations*.

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## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt SIX questions only, taking TWO from each group.*

## GROUP A

1. Explain, and illustrate by concrete examples, the following statement about the Vedic Aryans:—

'It is plain that their religion and habits differed materially from those of Hindus in modern or even in early historical times. . . . Nevertheless, it is true that the roots of Hinduism go down into the Rigvedic Age.'

2. Sketch the Mauryan system of administration.

3. Explain the importance of the reigns of any two of the following:—(a) Skandagupta, (b) Yasodharman, and (c) Narasimhavarman.

4. What are the outstanding achievements of the Cholas?

## GROUP B

5. Sketch the life and character of *either* Alau-d-din Khilji *or* Firoz Tughlaq.

6. Sketch the history of the Kingdom of Vijayanagar in the sixteenth century A.D., and describe briefly the striking features of the capital city.

7. Describe the social and political relations between the Mughal emperors and the principal Rajput States.

8. Give a critical account of the character and achievements of Baji Rao I and Haidar Ali.

## GROUP C

9. Give a brief account of the Anglo-French struggle in South India from 1758 to 1761 A.D. To what causes do you attribute the final victory of the British?

10. Discuss Hastings' dealings with Chait Singh and the Begams of Oudh with special reference to the comments of P. E. Roberts.

11. Form an estimate of the achievements of Lord Hastings.

12. Enumerate the administrative and social reforms introduced by Lord William Bentinck and Lord Ripon.

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## ECONOMICS—HONOURS

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## • FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. Indicate the manner in which the law of substitution operates in the organization of industry. How does it apply to employers themselves?
2. 'The possible public advantages of combination lie in the mitigation of industrial fluctuations.' (TAUSSIG).
3. Why is it necessary to regard the income from invested capital as a quasi-rent? How do quasi-rents differ from true rents of land?
4. 'The most general statement of the conditions under which interest arises is that it results from an exchange of present things for things future.' Examine this statement.
5. What are the forces determining the level of wages (a) in a particular industry, (b) in industry in general?
6. State the principal influences determining the normal rate of profits, and show how this is affected by the growth of monopoly.
7. To what extent would you regard the premium on gold as the true measure of the extent of depreciation of an inconvertible paper currency?
8. Explain and justify the principle of 'charging what the traffic will bear'.  
'A lower charge on a long haul than on a short one is indefensible in theory, but often necessary in practice.' Explain.
9. How far is it possible for a government to combat the injurious effect of an industrial combination?
10. Critically examine the view that public ownership, regulation of industries, and labour legislation rest on the same principles and ideals as socialism.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Six questions only to be attempted.*

1. 'There is no better test of the excellence of a government than the efficiency of its judicial system.' Explain.

2. Discuss the elements of strength and weakness of democratic government. Point out some of the essential conditions of successful democracy.

3. What is the right of self-determination as applied to nationalities? Discuss the limitations on this right.

4. State the chief arguments for and against direct elections. Would you favour a system of direct election for the central legislature of India? Give reasons for your answer.

5. Discuss the main functions of Second Chambers. To what extent are these functions exercised by the Second Chamber in (a) Great Britain, (b) the United States?

6. Explain fully the term 'ministerial responsibility'. Describe the powers and duties of the Cabinet in Great Britain.

7. Compare and contrast the position of the President in France and in the United States.

8. Analyse the Preamble of the Government of India Act, 1919, and discuss the policy of Parliament underlying it.

9. Examine the position of ministers in a Governor's Province in India in relation to (a) the Governor, (b) the Executive Council, and (c) the Legislative Council.

10. Briefly state the salient features of the White Paper proposals for Indian Constitutional Reform.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer six questions only.*

1. What is the meaning and significance of the term 'National Dividend'? What are the methods you would follow to estimate the National Dividend in India?

2. What are the causes of the comparatively low productivity of agriculture in India? Suggest some steps which should be taken to increase the productivity.

3. 'In India there is really no problem of overpopulation at the present time.' Discuss carefully this view.

4. Discuss the problem of agricultural indebtedness in India. How far must measures of debt relief be supplemented by a policy of economic

and social development, including a better provision of marketing facilities?

5. What are the causes of the intensity of Japanese competition in India? State the steps recently taken by the Government of India to overcome unfair competition from Japan.

6. Discuss the main causes of industrial disputes in India. Suggest measures for settling such disputes.

7. What is meant by the purchasing power parity of the rupee? How would you measure the overvaluation or the undervaluation of the rupee since 1926?

8. 'Between 1931 and 1934 gold worth nearly 200 crores of rupees was exported from India.' Discuss the case for and against this export of gold from India.

9. State carefully the main features of the Indian Reserve Bank Act, 1934. Why is this Act the most important piece of legislation in the history of Indian banking?

10. Write a short essay on Indian provincial finance under the Montagu-Chelmsford Reforms, with special reference to Bengal.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. How far is it true to say that 'the loans of banks make the deposits of banks'? What are the limitations of this process of the creation of deposits?

2. 'Credit is the principal circulating medium, and so far as prices depend upon the circulating medium, it is to credit and not to gold that we must look as the immediate regulator of prices.' Comment on this proposition.

3. Define 'bank rate', 'market rate', and 'deposit rate', and show the connexion between them.

4. Discuss the advantages and drawbacks of the policy of amalgamation of banks, and illustrate them from the experience of the English banking system.

5. 'A falling price-level is not only a symptom of depression but an active agent in increasing its severity and prolonging its duration.' Explain this proposition, and discuss the general economic consequences of a pronounced fall in the price-level.

6. Examine, with reference to present conditions, the merits of the alternative policies of (a) going back to the Gold Standard, and (b) adoption of a 'managed' currency as proposed by Mr. Keynes and others.

7. State the main factors which influence the fluctuations of foreign exchanges. Does the depreciation of a country's foreign exchanges bring any economic advantage to that country?

8. Compare the merits of (a) the income tax, and (b) inheritance taxes, from the point of view of their respective effects upon production and saving.

9. What light does the theory of utility throw upon the question of progressive taxation? What are the other reasons that have been advanced for taxing the rich at a higher rate than the poor?

10. 'The study of the shifting and incidence of taxation is a branch of the study of Value.' Explain.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Any six questions to be answered.*

1. Comment on the following passages from Aristotle's *Politics* :—

(a) 'Is he only a true citizen who has a share of office, or is the mechanic to be included?'

(b) 'The legislator should always include the middle class in his government.'

2. Give Aristotle's views on the 'elements' of the state, or on the organs of government. How far has his classification stood the test of time?

3. Discuss Aristotle's views regarding the circumstances which give rise to seditions and political revolutions.

4. What are Aristotle's views on the material conditions of the ideal state?

5. What are the best ways, in Aristotle's view, of 'preserving' states?

6. Give Aristotle's 'cycle' of political change. Compare it with that of Plato.

7. Examine John Stuart Mill's views on the question: 'Should a member of the legislature be bound by the instructions of his constituents?'

8. Examine John Stuart Mill's views on Second Chambers, and, with special reference to the creation of a Second Chamber in Bengal, comment on the following :—

'The best constitution of a Second Chamber is that which embodies the greatest number of elements exempt from the class interests and prejudices of the majority, but having in themselves nothing offensive to democratic feeling.'

9. Examine John Stuart Mill's 'distinctive characteristics' of the form of government best fitted to promote the interests of any given society.

10. Examine together the two statements below—the first from the *Politics* of Aristotle, the second from Mill's *Representative Government* :—

(a) 'One principle of liberty is for all to rule and be ruled in turn, and indeed democratic justice is the application of numerical not proportionate equality; whence it follows that the majority must be supreme and that whatever the majority approve must be the end and the just.'



(b) 'A completely equal democracy, in a nation in which a single class composes the numerical majority, cannot be divested of certain evils; but those evils are greatly aggravated by the fact that the democracies which at present exist are not equal, but systematically unequal in favour of the predominant class.'

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### SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

Write an essay on any ONE of the following subjects:—

- (a) 'Inequality of incomes and status is an inevitable product of Economic Progress.'
  - (b) The Gold Standard—its present position and its future.
  - (c) Cottage industries in Bengal.
  - (d) The League of Nations considered as an experiment in Internationalism.
  - (e) The position of Indian States in the proposed All-India Federation.
  - (f) The Party System—its success and failure.
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### ECONOMICS—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value. •*

*Answer any SIX questions.*

1. 'There is not any one method of investigation which can properly be called the method of Economics; but every method must be made serviceable in its proper place, either singly or in combination with others.' Comment on this statement, and bring out carefully the advantages and the limitations of the various methods for the study of economics.

2. 'Ricardo and his followers maintain that the value of commodity is fixed by its cost of production: while Jevons and those that agree with them contend that value is fixed by its marginal utility.' Which of these two views is correct?

3. 'Interest is the measure of marginal productivity and marginal forbearance.' Discuss this statement.

The rate of interest on call loans is 2 per cent. in the Calcutta money market, but a cultivator borrows at 18 per cent. How would you explain this difference?

4. 'Profits are the surplus of the intramarginal over the marginal producer.'

'Profits are a constituent element of the normal price.'

Are these two views about the nature of profits reconcilable?

5. 'The national dividend is at once the aggregate net product of, and the sole source of payment for, all agents of production within the country.'

What is national dividend, and on what principle is it distributed among the factors of production?

6. What are the causes of rent? Does rent enter into price?

7. 'The distribution of metallic money is in large measure the result of international forces.' Explain this statement.

8. How would you measure the variations in the purchasing power of money?

9. What are the limits within which the rate of foreign exchange can normally fluctuate? Are there any such limits in a regime of inconvertible paper money?

10. 'The assumption and ownership by Government of all means of production might cut deeper into the roots of social prosperity than appears at first sight.' Discuss this statement in the light of modern developments.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. What are the essential factors that contribute to the development of Nationalism in a country?

To what extent do they exist in India?

2. What is meant by the Organismic Theory of the State? How far is the theory sound?

3. Describe the characteristics of a true Federal Union? In what respects does such a union differ from a confederation? Illustrate your answer.

4. What is meant by 'law' in Political Science? Examine the sources of law.

5. What are the advantages claimed for the bicameral system of legislature? How far are they real? Should Bengal have a Second Chamber in the new Constitution of India? Give reasons for your answer.

6. Discuss the essential features of the cabinet system of government as it obtains in Great Britain.

7. Describe the position and powers of the Head of the Federal Executive in the United States of America.

8. Explain how constitutional amendments may be made in England, France, and the U.S.A.

9. Describe the structure of the provincial executive in a Governor's Province in India, with special reference to the position of the Governor therein.

10. To what extent is the legislative control over the expenditure of the Central Government effective in India?

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal value.*

*Answer any SIX questions.*

1. Discuss the various impediments in the way of agricultural improvement in India. Suggest means whereby these obstacles can be removed.

2. Examine the present position of the handloom cotton industry in India. Suggest means for its improvement.

3. Describe the famine relief policy of the Government of India.

4. Examine in detail the actual and possible benefits of Co-operative Credit Societies in India.

5. Account for the causes of the industrial backwardness of the Indian people. What measures would you suggest for the rapid industrialization of the country?

6. Account for the comparative inefficiency of Indian industrial labour. What measures would you suggest to improve the efficiency of Indian labour?

7. Account for the absence of the banking habit among the people of India. What measures would you suggest to encourage this habit among the mass of the people?

8. Discuss fully the economic effects of the employment of foreign capital in India.

9. Examine the main features of the Indian currency system.

10. Write notes on any ONE of the following :—

- (a) The Gold Exchange Standard.
- (b) Provincial finance in India.

## PHILOSOPHY—HONOURS

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt only FIVE questions.*

1. Discuss the relation between Psychology and Philosophy. Is it possible to separate Psychology entirely from Philosophy?

2. 'Consciousness occupies a curious middle-ground between reflex and automatic activities upon the one hand and habitual activities upon the other' (ANGELL). Explain fully this statement.

3. What is meant by the 'fringe of consciousness'? Is it possible to get rid of it altogether?

4. Discuss the different views that have been held about the nature of habit, indicating especially the views of James and McDougall. What part does habit play in the development of mental life?

5. 'No state once gone can recur and be identical with what it was before' (JAMES). Bring out the full implications of this view.

6. 'Interest is conative, rather than cognitive' (McDOUGALL). Explain and examine this view.

7. Give the gist of McDougall's criticism of the Lange-James theory of emotion.

8. 'Objective coercion is of the very essence of belief' (SROUT). Bring out the full meaning of this statement.

9. Discuss the importance of the social factor in the development of self-consciousness.

10. Write notes on:—specious present, primary memory, substantive and transitive states of mind, organic memory, pre-perception.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any FIVE questions.*

1. Explain the relation of Ethics *either* to Psychology *or* to Metaphysics.

2. What different views have been taken of the object of the moral judgement? Give your own view, with your reasons.

3. What different views have been held on the nature of moral obligation? State your own view, and the grounds on which you hold it.

4. Compare conscience and prudence. Which of them offers better moral guidance?

5. Is it possible to make a distinction among pleasures in respect of quality? Is such a distinction consistent with Hedonism?

6. In what different ways has the highest good been conceived? Explain your own view on the subject.

7. Explain and distinguish virtue and duty. Discuss the possibility of 'a conflict of duties'.

8. Explain what is meant by moral sanctions. Are such sanctions really necessary to Ethics? Discuss the question.

9. Explain any **two** of the following:—

(a) To *get* pleasure, one must *forget* it.

(b) If Conscience had *power*, as it has manifest *authority*, it would absolutely govern the world.

(c) Kant's view of the relation of duty to inclination.

(d) To desire a thing and to find it pleasurable, are two ways of expressing the same psychological fact.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value. \**

*Answer any FIVE questions.*

1. What is Metaphysics? Can Metaphysics be independent of Epistemology?

2. Distinguish between science and philosophy, and explain the transition from the sciences to philosophy.

3. What do you understand by scepticism? Can scepticism be a method of philosophy? How far is the philosophy of Kant indebted to the scepticism of Hume?

4. Explain the concept of evolution, and discuss the points at issue between emergent and repetitive evolution.

5. Explain the position of realism and idealism as theories of reality. Which of them do you consider to be the more satisfactory, and why?

6. Analyse the concept of self, and discuss the different theories with regard to it.

7. What do you mean by freedom of the finite self, and how do you reconcile it with God's omniscience?

8. Explain and examine the following statement:—'Theism formulates a view of God and the world which is between the extremes of deism and pantheism.'

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

1. *Either*, Characterize the religious consciousness, distinguishing it from the moral, artistic, and philosophic consciousness.

*Or*, What is the bearing of the psychology of the religious consciousness on the question of the validity or value of religion?

2. *Either*, Examine the view that the existence of God does not admit of logical proof.

*Or*, Examine the logic of the moral proof of God's existence.

3. *Either*, Elaborate the notion (a) of a first cause of the world, (b) of creation as an eternal act.

*Or*, Critically present the main objections to the traditional argument from design.

4. *Either*, Bring out the concept of the absolute and discuss how far it can be a substitute for the concept of a personal God.

*Or*, Explain and examine Bosanquet's view that 'the formal distinctness of finite selves is an appearance due to impotence and incidental to their finitude.'

5. *Either*, Is the belief in the reality of space and time compatible with the belief in God?

*Or*, Is the belief in the freedom of the will essential to religion?

## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*\*The questions are of equal value.*

*Answer any FIVE questions.*

1. How does Descartes formulate the ontological argument? Estimate its value as a proof for the existence of God.
2. In what sense is Spinoza's definition of substance an improvement on that of Descartes?
3. Give a critical account of Spinoza's theory of human freedom.
4. State the views of Locke and Leibniz on the question of innate ideas.
5. Examine Berkeley's theory of the perception of space.
6. *Esse is percipi.* Explain and offer critical comments.
7. Give a critical account of Berkeley's theory of abstract ideas.
8. Compare the function assigned to 'notions' in Berkeley's scheme with that of 'categories' in Kant's system.
9. What place does Kant assign to 'understanding' in our knowledge of objects?
10. How does Kant's view of causation differ from that of Hume?

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Question 7 and any THREE of the remaining questions.*

1. State the argument by which Philonous convinces Hylas that the sensible qualities of things have no real being without the mind. 20
2. How does Philonous show Hylas that no distinction can be made between *sensation* and *object*? Examine his position. 20
3. *Hylas*. 'What more easy than to conceive a tree or house existing by itself, independent of, and unperceived by, any mind whatsoever.' How does Philonous demonstrate the absurdity of this view? 20
4. What, according to Philonous, is the difference between his conception of God and that of ordinary men? State fully the reasons he gives for his view. 20
5. *Hylas*. 'Since you have no *idea* of the mind of God, how can you conceive it possible that things should exist in his mind? Or, if you can conceive the mind of God, without having an idea of it, why may I not be allowed to conceive the existence of Matter, notwithstanding I have no idea of it?' What is Philonous' answer to this? 20
6. State and examine Berkeley's conception of Identity. 20
7. Write an essay on any ONE of the following subjects:— 40
  - (a) Mental phenomena and their classification.
  - (b) The Cartesian proofs of the existence of God.
  - (c) The meaning and significance of evolution.
  - (d) My station and its duties.
  - (e) Agnosticism and positivism.
  - (f). 'One who is reverent and steady and has his senses under control acquires wisdom. Having acquired wisdom he soon obtains the supreme peace.'

## PHILOSOPHY—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer FIVE questions only.*

1. The standpoint of Psychology has been described as *individualistic*. Explain what this means and discuss how it can be reconciled with the possibility of Psychology as a *science*.

2. Distinguish between sensation and perception, giving concrete illustrations.

Explain the proposition that in an adult mind there is no such thing as pure sensation.

3. Discuss the function of imagination in the economy of mental life, clearly noting in this regard the distinction between memory and productive imagination.

4. *Either*, Discuss the relative merits of touch and vision as organs of space-perception.

Or, Write a short essay on the development of our idea of the external world.

5. Discuss the nature of instinct by reference to concrete instances from animal life.

How is instinct related to emotion?

6. Formulate and illustrate the different laws of pleasure and pain.

7. Critically discuss James's theory of emotion.

8. Indicate the different stages of voluntary action by reference to a concrete case.

What elements of a voluntary action disappear when a habit is formed?

9. Write critical notes on any THREE of the following:—Faculty Psychology; consciousness as a function of the brain; Psychology as a science of the soul; thought as sub-vocal speech; mind as a stream of consciousness; image as weak percept; feeling as a function of sensation.



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*\* The questions are of equal value.*

*Answer any FIVE questions.*

1. Explain the relation of Ethics to any ONE of the following : Psychology, Metaphysics, and Theology.

2. Fully explain the definition : Ethics is a normative science.

3. Distinguish the moral from the non-moral. Characterize the precise object of the moral judgement.

4. Why am I *morally obliged* to do what I perceive to be right? Briefly explain the different views held on the subject.

5. Explain what is meant by the moral sanctions.

6. What are the different theories of punishment? Give your own theory, with your reasons.

7. Explain and examine the theory that pleasure is the sole and ultimate end of action.

8. Explain the ethical doctrine of self-realization.

9. What is your own view of the relation of the individual to society? How would you, according to this view, reconcile the conflicting claims of egoism and altruism?

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Only FIVE questions to be attempted.*

1. Explain the relation between epistemology and Philosophy. What precisely is meant by saying that Philosophy is the criticism of experience?

2. What is meant by criticism as a method of Philosophy? How is it related to scepticism?

3. Explain the meaning of idealism in Philosophy. Explain realism and idealism as metaphysical theories.

4. Analyse the idea of causality. Examine the treatment of the category of causality by Hume and Kant respectively.

5. Explain critically the idea of substance. How far does Kant's category of substance save knowledge from universal phenomenalism?

6. How do you conceive the relation between self and the world?

7. Give a critical estimate of the doctrine of evolution as an explanation of the origin of species.

8. Trace the growth of the idea of personality. Discuss the question as to how far the personality of man is consistent with the pantheistic conception of the Deity.

9. Explain the nature of reason. Is reason present in lower animals? Discuss the bearing of this question on the problem of future life.

# B. A. and B. Sc. Examinations, 1935.

## MATHEMATICS—HONOURS

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. (i) Prove that the arithmetic mean of any number of positive quantities is *generally* greater than their geometric mean. Can the two means ever coincide? Give reasons.

(ii) If  $x, y$  be two positive quantities, prove that the expression

$$P \equiv \frac{xy+7x+3y+21}{xy+4x+5y+20} + \frac{xy+x+5y+5}{xy+7x+y+7} + \frac{xy+4x+y+4}{xy+x+3y+8}$$

is, in general,  $>3$ . Do there exist any values of  $x, y$  for which  $P=3$ ? If so, find them.

2. (i) If the series

$$\sum_{n=0}^{\infty} u_n = u_0 + u_1 + u_2 + \dots + u_n + \dots \text{to } \infty$$

be convergent, prove that

$$\sum_{n=0}^{\infty} u_n^2 = u_0^2 + u_1^2 + u_2^2 + \dots + u_n^2 + \dots \text{to } \infty$$

is also convergent.

(ii) Establish the convergence of each of the following series :

$$(1) \sum_{n=0}^{\infty} \frac{1}{n^2} ;$$

$$(2) \sum_{n=0}^{\infty} \frac{1}{(n+1)(n+2)}.$$

3. (i) Prove the formulae

$$p_n = a_n p_{n-1} + p_{n-2},$$

$$q_n = a_n q_{n-1} + q_{n-2},$$

where  $\frac{p_n}{q_n}$  is the  $n$ th convergent to the continued fraction

$$a_1 + \frac{1}{a_2 + \frac{1}{a_3 + \dots \frac{1}{a_n + \dots}}}$$

(ii) If  $\frac{p_n}{q_n}$  and  $\frac{p'_n}{q'_n}$  be respectively the  $n$ th convergents to the two continued

fractions

$$1 + \frac{1}{b + \frac{1}{a + \frac{1}{b + \dots \frac{1}{a + \frac{1}{b + \dots}}}}},$$

and

$$\frac{1}{b + \frac{1}{a + \frac{1}{b + \frac{1}{a + \dots \frac{1}{b + \frac{1}{a + \dots}}}}},$$

verify the relations

$$(1) p_{2n} : p'_{2n} = q'_{2n-1} : q_{2n-1},$$

$$(2) p_{2n+1} = p'_{2n+1} = q_{2n} = q'_{2n}.$$

4. (i) Explain briefly any method of decomposing a *rational* fraction of the form  $\frac{f(x)}{\phi(x)}$  into the sum of a number of *partial* fractions.

(ii) Reduce each of the two expressions

$$P \equiv \frac{ax^2 + 9x + 14}{(x+2)(x-2)(3x-1)}$$

and

$$Q \equiv \frac{bx^2 + 2x + 16}{(x+2)(x-2)(3x-1)}$$

to the sum of three partial fractions.

Granting that the difference  $P - Q$  retains a *finite* value for each of the two values of  $x$ , viz.  $\frac{1}{3}$ , 2, prove that the constants  $a$ ,  $b$  must conform to the relation

$$b = a + 3.$$

5. (i) Explain the principle of *mathematical induction*, and apply it to establish the binomial theorem for a positive integral exponent.

Write down the binomial expansion of  $(1+x)^{19}$ , and deduce immediately that, if  $x$  be any positive integer, the integer

$$(1+x)^{19} - 1 - x^{19}$$

is divisible by 19.

(ii) Use the exponential theorem to sum each of the following infinite series :

$$(1) \frac{1}{1} + \frac{1}{3} + \frac{1}{5} + \dots + \frac{1}{2n+1} + \dots$$

$$(2) \frac{2^2}{1} + \frac{3^2}{2} + \frac{4^2}{3} + \dots + \frac{(n+1)^2}{n} + \dots$$

6. (i) Express rationally (in terms of the coefficients) the condition or conditions that must hold in order that the cubic

$$ax^3 + 3bx^2 + 3cx + d = 0$$

may have (1) *two* equal roots, (2) *three* equal roots.

(ii) Given that  $\alpha, \beta, \gamma$  (the roots of the above cubic) fulfil the relation

$$\begin{vmatrix} \alpha^4 & \alpha^2 & 1 \\ \beta^4 & \beta^2 & 1 \\ \gamma^4 & \gamma^2 & 1 \end{vmatrix} = 0,$$

prove that *either*  $9bc = ad$ ,

*or else*  $a^2d^2 - 6abcd + 4ac^3 + 4db^3 - 3b^2c^2 = 0$ .

7. (i) Explain the method of solving the biquadratic

$$ax^4 + 6cx^2 + 4dx + e = 0$$

by means of the initial assumption

$$x = \sqrt{p} + \sqrt{q} + \sqrt{r}.$$

(ii) For the biquadratic

$$x^4 - 22x^2 - 48x - 23 = 0,$$

start with a *trial solution* of the form

$$x = \sqrt{p} + \sqrt{q} + \sqrt{pq},$$

adjust the constants  $p, q$ , and calculate all the four roots.

8. (i) Define a reciprocal equation, and write down its typical form when the degree is even.

Show that the equation

$$x^4 + 6x^3 + 21x^2 + 42x + 33 = 0$$

can be converted into a reciprocal equation by the substitution  $x = y + k$ , provided that the constant  $k$  is properly chosen.

(ii) Hence, or otherwise, solve the above equation completely.

9. (i) Enunciate (without proof) Sturm's theorem on the number of (real) roots of an algebraic equation that lie in any specified interval.

Calculate Sturm's functions for the equation

$$f(x) \equiv 2x^3 - 19x^2 + 42x - 27 = 0,$$

and verify that all the three roots are real and lie between 1 and 7.

(ii) Deduce that the equation  $f(x^2) = 0$  has all its roots *real*, and  $f(-x^2) = 0$  has all its roots *complex*.

10. (i) Compare the magnitudes of the two determinants

$$\begin{vmatrix} a_1 & b_1 & c_1 & d_1 \\ a_2 & b_2 & c_2 & d_2 \\ a_3 & b_3 & c_3 & d_3 \\ a_4 & b_4 & c_4 & d_4 \end{vmatrix} \quad \text{and} \quad \begin{vmatrix} \lambda_1 & \lambda_2 & \lambda_3 & \lambda_4 \\ a_2 & b_2 & c_2 & d_2 \\ a_3 & b_3 & c_3 & d_3 \\ a_4 & b_4 & c_4 & d_4 \end{vmatrix}$$

where

$$\lambda_1 \equiv a_1 - pa_2 - qa_3 - ra_4,$$

$$\lambda_2 \equiv b_1 - pb_2 - qb_3 - rb_4,$$

$$\lambda_3 \equiv c_1 - pc_2 - qc_3 - rc_4,$$

$$\lambda_4 \equiv d_1 - pd_2 - qd_3 - rd_4,$$

and  $p, q, r$  are any three quantities.

(ii) If  $P \equiv (b+c)(c+a)(a+b)$ ,

prove that the determinant

$$\begin{vmatrix} x^3 & x^2 & x & 3 \\ a^3 + P & a^2 + 2bc & b+c-a & 1 \\ b^3 + P & b^2 + 2ca & c+a-b & 1 \\ c^3 + P & c^2 + 2ab & a+b-c & 1 \end{vmatrix}$$

contains  $x - (a+b+c)$  as a factor. Also find the complementary factor.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Only six questions to be attempted, THREE from each group.*

### GROUP A

1. (i) Find the coordinates of the in-centre of the triangle the equations of whose sides, referred to rectangular axes, are

$$x - y + 1 = 0, \quad x + y - 7 = 0, \quad x - 3y + 5 = 0.$$

(ii) Prove that the distance from the origin to the orthocentre of the triangle formed by the lines

$$\frac{x}{\alpha} + \frac{y}{\beta} = 1 \text{ and } ax^2 + 2hxy + by^2 = 0,$$

is 
$$\frac{(a+b)a\beta(a^2+\beta^2)^{\frac{1}{2}}}{aa^2-2ha\beta+b\beta^2}.$$

2. (i) Find the equation to the circle orthogonal to the three circles

$$(x-a)^2 + (y-b)^2 = b^2, (x-b)^2 + (y-a)^2 = a^2, \quad \bullet$$

and

$$(x-a-b-c)^2 + y^2 = ab+c^2.$$

- (ii) Prove that the locus of the points at which the circles

$$x^2 + y^2 - 2kx + \delta = 0 \quad \text{and} \quad x^2 + y^2 - 2k'x + \delta = 0$$

subtend the same angle is the coaxial circle

$$x^2 + y^2 - 2\frac{kk' + \delta}{k + k'}x + \delta = 0.$$

3. An ellipse of semi-axes  $a$  and  $b$  slides between two fixed perpendicular lines. Obtain the locus of (i) its centre, (ii) its focus.

4. If the normals at the points  $P_1$  and  $P_2$  of the parabola  $y^2 = 4ax$  intersect at  $P$  on the curve, prove that the ordinates of  $P_1$  and  $P_2$  are the roots of the equation

$$y^2 + ky + 8a^2 = 0,$$

where  $k$  is the ordinate of  $P$ . Hence, or otherwise, prove that

$$P_1 P_2 P. 2a = PG^2,$$

where  $G$  is the point in which the normal at  $P$  cuts the axis of the parabola.

5. Find the equation to the director-circle of the hyperbola

$$\frac{l}{r} = 1 + e \cos \theta.$$

Show that the equations to its asymptotes are

$$l = \frac{e^2 - 1}{e} \left( \cos \theta \pm \frac{\sin \theta}{\sqrt{e^2 - 1}} \right).$$

6. Find the locus of the centres of conics through four given points.

Show also that the asymptotes of any conic through the four points are parallel to the conjugate diameters of the centre-locus.

#### GROUP B

7. (i) If

$$\tan \frac{1}{2} (y + z) + \tan \frac{1}{2} (z + x) + \tan \frac{1}{2} (x + y) = 0,$$

prove that

$$\sin x + \sin y + \sin z + 3 \sin (x + y + z) = 0.$$

- (ii) If

$$\cos A = \cos \theta \sin \phi, \quad \cos B = \cos \phi \sin \psi,$$

$$\cos C = \cos \psi \sin \theta,$$

and  $A + B + C = \pi$ , prove that

$$\tan \theta \tan \phi \tan \psi = 1.$$

8. (i) Prove that the distance of the centre of the nine-point circle of the triangle  $ABC$  from the angle  $A$  is

$$\frac{1}{2}R\sqrt{1+8\cos A\sin B\sin C},$$

where  $R$  is the radius of the circum-circle of  $ABC$ .

(ii) If  $\sin^2 A + \sin^2 B + \sin^2 C = 1$ ,

show that the circum-circle of the triangle  $ABC$  cuts its nine-point circle orthogonally.

9. Prove that

$$\sin n\theta = 2^{n-1} \sin \theta \sin \left( \theta + \frac{\pi}{n} \right) \dots \sin \left( \theta + \frac{n-1}{n} \pi \right).$$

Hence, or otherwise, show that

$$\tan^{-1} (\cot nx \tanh ny)$$

$$= \tan^{-1} (\cot x \tanh y) + \tan^{-1} \left\{ \cot \left( x + \frac{\pi}{n} \right) \tanh y \right\}$$

$$+ \tan^{-1} \left\{ \cot \left( x + \frac{2\pi}{n} \right) \tanh y \right\} + \dots \text{to } n \text{ terms.}$$

10. Show that, under certain restrictions to be mentioned,

$$\cos n\theta =$$

$$1 - \frac{n^2}{2!} \sin^2 \theta + \frac{n^2(n^2 - 2^2)}{4!} \sin^4 \theta - \frac{n^2(n^2 - 2^2)(n^2 - 4^2)}{6!} \sin^6 \theta + \dots$$

$$\text{Prove that } \pi^2 = 18 \sum_{n=0}^{\infty} \frac{(n!)^2}{(2n+2)!}.$$

11. (i)  $\tan x = n \tan y$ , find a series for  $y$ .

(ii) Sum to  $n$  terms the series

$$\frac{1}{\cos \theta + \cos 3\theta} + \frac{1}{\cos \theta + \cos 5\theta} + \frac{1}{\cos \theta + \cos 7\theta} + \dots$$

12. Expand  $\cot x$  in an infinite series.

Show that

$$\frac{\pi}{2\sqrt{3}} = 1 - \frac{1}{5} + \frac{1}{7} - \frac{1}{11} + \frac{1}{13} - \frac{1}{17} + \frac{1}{19} - \dots$$

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value. •*

*Attempt Questions 6 and 8, and any FOUR of the remaining questions.*

1. Find the conditions that

$$ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 1$$

should represent a surface of revolution.

Find the magnitudes and positions of the axes of the conicoid

$$2x^2 + 11y^2 + 26z^2 - 36yz + 18zx - 12xy = 4.$$

2. Show that any plane may be made to satisfy three given conditions.

Find the equations of the two planes through the points (0, 4, -3), (6, -4, 3), other than the plane through the origin, which cut off from the axes intercepts whose sum is zero.

3. Find the angle between the two straight lines in which the general cone of the second degree

$$f(x, y, z) \equiv ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 0$$

is cut by the plane

$$lx + my + nz = 0.$$

Prove that the straight lines which cut two given non-intersecting lines so that the length intercepted is constant are parallel to the generators of a circular cone.

4. Show that the equation to the pair of rectilinear generators of the surface

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1,$$

which pass through the point on the principal elliptic section whose eccentric angle is  $\theta$  is

$$\frac{x - a \cos \theta}{a \sin \theta} = \frac{y - b \sin \theta}{-b \cos \theta} = \pm \frac{z}{c}.$$

Prove that the trace on the principal elliptic section of tangent planes at points at which the generators are at right angles envelops an ellipse of area

$$\pi ab(a^2 + c^2)^{\frac{1}{2}} (b^2 + c^2)^{\frac{1}{2}} (a^2 + b^2)^{-1}.$$

5. Show that any set of three equal conjugate diameters of the ellipsoid whose equation is

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$$

lie on a circular cone, and that the cosine of the angle between any two is

$$\frac{a^2 - b^2}{a^2 + 2b^2}.$$



6. Find the equations to the locus of these points on the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$$

at which normals to it will touch the cylinder

$$x^2 + y^2 = p^2 ;$$

and hence show that the least distance between the axis of  $x$  and a normal to the ellipsoid cannot exceed  $b - c$ .

7. Enunciate and prove Meunier's theorem.

If  $\rho, \rho'$  are the radii of curvature of any two perpendicular normal sections at a point of a surface, show that  $\frac{1}{\rho} + \frac{1}{\rho'} = \text{constant}$ .

8. (i) Establish the formula

$$V \cdot a\beta\gamma = aS\beta\gamma - \beta S\gamma a + \gamma Sa\beta.$$

- (ii) Prove that

$$S \cdot V\beta\gamma \cdot V\gamma a \cdot Va\beta = -(Sa\beta\gamma)^2.$$

9. Define 'mean point' of a group of points.

Prove, by vector method, that the mean point of a tetrahedron is the mean point of the tetrahedron formed by joining the mean points of the faces ; and also that of the mean points of the edges.

10. Interpret geometrically the following equations :

$$(i) \quad S \rho a = S \beta a : \quad (ii) \quad V \rho a = V \rho \beta.$$

What vector is represented by  $a^{-1}\beta a$  ? Show that the internal and external bisectors of an angle are at right angles to each other.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*You are required to attempt Questions 1, 8, and 11 : full marks may be obtained by answering these and any FOUR of the remaining questions.*

1. (i) State (without proof) Rolle's theorem, and apply it to give a rigorous proof of the theorem of the mean value without using any graph.

(ii) Apply Maclaurin's theorem to find the coefficient of  $x^n$  in the expansion of  $e^a \sin^{-1}x$ .

2. Prove carefully the theorem : If a function  $f(x)$ , defined for a domain  $(a, b)$ , has either a maximum or a minimum for a value  $c$  of  $x$  within the domain, then  $f'(c)$  must be zero.

$PQ$  is a normal chord of an ellipse of semi-axes  $a, b$ . Show that if  $a > b\sqrt{2}$ , there are eight positions of  $P$  for which  $PQ$  is a maximum or a minimum.

3. (i) Prove that under certain conditions

$$\frac{\partial}{\partial x} \left( \frac{\partial u}{\partial y} \right) = \frac{\partial}{\partial y} \left( \frac{\partial u}{\partial x} \right).$$

- (ii) Prove the identity

$$\begin{aligned} \left( y \frac{\partial}{\partial z} - z \frac{\partial}{\partial y} \right) \left( z \frac{\partial u}{\partial x} - x \frac{\partial u}{\partial z} \right) - \left( z \frac{\partial}{\partial x} - x \frac{\partial}{\partial z} \right) \left( y \frac{\partial u}{\partial z} - z \frac{\partial u}{\partial y} \right) \\ = y \frac{\partial u}{\partial x} - x \frac{\partial u}{\partial y}. \end{aligned}$$

$u$  being a function of the independent variables  $x, y, z$ .

4. (i) Write down (without proving) expressions for

- (1) the subtangent and subnormal with Cartesian coordinates,
- (2) the angle between the radius vector and the tangent,
- (3) the polar subtangent and subnormal, at any point of a plane curve.

- (ii) Define the evolute of a curve, and find the evolute of the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

5. Explain the method of finding the envelope of a series of curves represented by

$$F(x, y, a) = 0,$$

where  $a$  is a variable parameter.

From a point  $P$  on the folium

$$\left. \begin{aligned} x &= \frac{3at}{(1+t^2)}, \\ y &= \frac{3at^2}{(1+t^2)}, \end{aligned} \right\}$$

two tangents,  $PQ, PQ'$ , distinct from the tangent at  $P$ , are drawn to the curve. Prove that  $QQ'$  touches a fixed rectangular hyperbola  $4xy = 9a^2$ .

6. Trace carefully any two of the curves

(i)  $y^2 = ax^2 + x^3$ ,

(ii)  $x^3 + y^3 = 3axy$ ,

(iii)  $x^2y^2 = a^2(x^2 - y^2)$ ,

(iv)  $r = a \sec \frac{\theta}{3}$ .

7. Define the definite integral  $\int_a^b f(x) dx$  as the limit of a sum, and prove carefully that the limit exists if, in addition to the continuity of  $f(x)$  in the domain  $(a, b)$ , it is assumed that  $f(x)$  is the differential coefficient of a function.

8. Evaluate any THREE of the following :

$$\int \frac{dx}{\sqrt{\left(\frac{2}{3}x^3 - x^2 + \frac{2}{3}\right)}}, \quad \int \frac{1+x^2}{1+x} dx, \quad \int \sin^{-1} x dx,$$

$$\int e^{ax} \sin bx \, dx.$$

9. Find the values of the definite integrals

$$\int_a^b \frac{dx}{\sqrt{(x-a)(b-x)}}, \quad \int_0^{\frac{\pi}{2}} \sin^{10} x \cos^{12} x dx,$$

$$\int_0^{\frac{\pi}{2}} \frac{\sin x}{\sin x + \cos x} dx.$$

10. Show how to find the length of a curve given (i) in Cartesian, (ii) in polar coordinates, and find the whole length of the cardioid

$$r = a(1 + \cos \theta).$$

11. Solve completely the differential equations

$$(i) \left(\frac{dy}{dx}\right)^2 \left(y - x \frac{dy}{dx}\right) = a;$$

$$(ii) \frac{d^2 y}{dx^2} - 5 \frac{dy}{dx} + 6y = 2x^2 + e^{2x};$$

$$(iii) (1+x^2) \frac{dy}{dx} + 2xy = 4x^2.$$

12. (i) Solve

$$x^2 \frac{d^2 y}{dx^2} + 3x \frac{dy}{dx} + y = 0.$$

(ii) Expand  $x^2$  in Fourier series.

## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt six questions only.*

1. Inside a fixed smooth hollow cylinder of radius  $R$ , whose generators are horizontal, there are placed symmetrically two equal smooth cylinders, each of radius  $r$ ; a third smooth cylinder, equal to each of the latter, is placed symmetrically on them. Show that equilibrium is impossible unless  $R < r(1 + 2\sqrt{7})$ .

2. A rigid body is acted on at given points by a system of coplanar forces whose magnitudes and directions in space are given. If the body is

displaced in any manner, find the changes in the resultant force and couple.

If the body be in a position of equilibrium, show that the equilibrium is stable or unstable according as the virial of the forces is positive or negative in the position of equilibrium.

3. A right circular cylinder, radius  $a$ , whose centre of gravity is at a distance  $c$  from the axis, is placed in the angle between a horizontal and a vertical plane, so that its axis is horizontal. If the planes are equally rough, show that it will just not be able to slip if

$$c = a \frac{\mu + \mu^2}{1 + \mu^2},$$

where  $\mu$  is the coefficient of friction.

4. Enunciate the principle of virtual work in the most general form.

$ABCDEF$  is a regular hexagon formed of light rods smoothly jointed at their ends with a diagonal rod  $AD$ . Four equal forces  $P$  act inwards at the middle points of the rods  $AB$ ,  $CD$ ,  $DE$ ,  $FA$ , and at right angles to the respective sides. Find the stress in the diagonal.

5. (i) Show that the circle is the only curve in which the centroid of the area included between the curve and two radii drawn from a fixed point always lies on the straight line bisecting the angle between the radii.

(ii) A uniform string hangs in the form of a parabola, whose focus is  $S$ , under the action of normal forces only. Show that the force at any point  $P$  varies inversely as  $(SP)^{3/2}$ , and that the tension is constant.

6. (i) The speeds at the extremities of a focal chord of the path of a projectile are  $v$ ,  $v'$ , and  $u$  is the horizontal speed. Show that

$$\frac{1}{v^2} + \frac{1}{v'^2} = \frac{1}{u^2}.$$

(ii) Two particles are projected from the same point at the same instant with velocities  $v$ ,  $v'$ , and in directions  $\alpha$ ,  $\alpha'$ . Prove that the time which elapses between the transits through the other point which is common to both their paths is

$$\frac{2}{g} \frac{vv' \sin(\alpha - \alpha')}{v \cos \alpha + v' \cos \alpha'}.$$

7. (i) A uniform chain of length  $l$  is suspended vertically with its lower end just touching a horizontal table, and allowed to fall. Find the pressure on the table when a length  $x$  has reached it.

(ii) A mass  $M$  is fastened to a chain of mass  $m$  per unit length coiled up on a rough horizontal plane (coefficient of friction  $= \mu$ ). The mass is projected from the coil with velocity  $V$ . Show that it will be brought to rest in a distance

$$M \left\{ \left( 1 + \frac{3m V^2}{2M \mu g} \right)^{\frac{1}{3}} - 1 \right\}.$$

8. (i) Find the effect on the orbit (central) of an instantaneous change in the value of the absolute acceleration  $\mu$ .

(ii) The earth's present orbit being taken to be circular, find what its path would be if the sun's mass were suddenly reduced to  $\frac{1}{n}$  of what it is now.

9. (i) A curve is described by a particle having a constant acceleration in a direction inclined at a constant angle to the tangent. Show that the curve is an equiangular spiral.

(ii) A curve in a vertical plane is such that the time of describing any arc, measured from a fixed point on it, is equal to the time of sliding down the chord of the arc. Find the curve.

10. (i) When two imperfectly elastic spheres impinge on each other, show that *vis viva* is always lost.

(ii) A number of particles originally in a straight line fall from rest, and rebound from a partially elastic horizontal plane. Prove that, at any time, the particles which have rebounded once lie on a parabola.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Six questions to be attempted, THREE from each group.*

### GROUP A

1. Define 'centre of pressure'. Show that the centre of pressure of a triangular plate immersed vertically in a liquid coincides with the mass centre of three particles at the middle points of the sides of the triangle, each mass being proportional to its depth below the surface.

A cubical box of uniform material containing air at atmospheric pressure floats in water half immersed, with two edges in the surface. One of the submerged sides is the lid of the box, which is hinged at the lowest edge. Prove that the lid will not open.

2. Show how the resultant horizontal and vertical pressure on a curved surface immersed in a liquid can be determined.

A vessel in the form of the greater segment of a sphere of radius  $a$ , cut off by a plane distant  $c$  from the centre, rests with its plane base on a table, and a fine vertical tube is fitted to the highest point. If the vessel is just filled with water, show that the thrust on the curved surface will be upwards if  $c < \frac{3}{4}a$ ; if  $c > \frac{3}{4}a$ , the thrust can be made upward by pouring water into the tube.

3. Deduce from elementary principles the condition of equilibrium of a floating body. Find also the condition that the equilibrium may be stable.

A cube floats with two faces horizontal in water. Show that for stability the specific gravity of the cube must not lie between 0.211 and 0.789.

4. (i) The density of mercury is 13.6 and that of air at 760 mm. pressure is 0.001293. Prove that when the reading of the mercury barometer at sea-level is 750 mm., its reading at an altitude 500 metres is about 704.7 mm., the variation of temperature being neglected.

(ii) The volumes of the receiver and barrel of an air-pump are  $A, B$ ;  $\rho, \sigma$  are the densities of atmospheric air and of the air in the receiver respectively, and  $H$  the atmospheric pressure. Prove that the work done in slowly raising the piston through one stroke is

$$H \left\{ B - A \frac{\sigma}{\rho} \log \left( 1 + \frac{B}{A} \right) \right\},$$

gravity being neglected.

5. Two equal and similar rods,  $AB, BC$ , fixed at an angle  $\alpha$  at  $B$ , rest in a fluid of twice the specific gravity with the angle  $B$  out of the fluid, and the axis of the system makes an angle  $\theta$  with the horizon. Prove that

$$\cos 2\theta + \sec \alpha = 2.$$

### GROUP B

6. Describe the diurnal path of a star on the celestial sphere at a given place. Give a neat diagram.

At a certain place a star with declination  $45^\circ \text{N.}$  sets while its path makes an angle of  $45^\circ$  with the horizon. Find the latitude of the place.

7. What is the effect of refraction on the positions of celestial bodies? Work out a simple formula for this effect. Describe how the constant of refraction is determined by observation.

Explain by representation on the celestial sphere, or otherwise, how at certain times the declinations of certain stars may remain unaffected by refraction.

8. Define 'equation of time', and state how and why the equation of time changes in course of the year.

If a body moving uniformly along the equator completes a cycle in a mean solar year, show that this body and the mean sun will have the same R.A.  $\alpha$  if

$$\tan (2\pi x + \alpha) \cos \omega = \tan \alpha,$$

where  $x$  is the interval between their passages through the first point of Aries measured as a fraction of a year, and  $\omega$  the obliquity of the ecliptic.

9. Explain the cause of aberration of light. What is its effect on astronomical observations? Find the maximum value of aberration in latitude of a star. Describe the apparent motion of a star due to aberration.

10. Explain the direct and retrograde motion of a planet and stationary points.

The orbits of two planets, one of which is the earth, are supposed to be coplanar circles of radii  $a$  and  $b$ . Find the positions of the stationary points.

## MATHEMATICS—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*Each question carries 16 marks, 4 marks being reserved for special excellence and neatness.*

*Only SIX questions, THREE from each group, to be attempted.*

## GROUP A

1. (i) Prove that

$$\tan \left( 45^\circ + \frac{A}{2} \right) = \sqrt{\frac{1 + \sin A}{1 - \sin A}} = \sec A + \tan A.$$

(ii) Solve the equation

$$\sin m\theta + \sin n\theta = 0.$$

2. (i) Prove that in a triangle  $ABC$ ,

$$R = \frac{a}{2 \sin A} = \frac{b}{2 \sin B} = \frac{c}{2 \sin C},$$

$$r = (s-a) \tan \frac{A}{2} = (s-b) \tan \frac{B}{2} = (s-c) \tan \frac{C}{2},$$

$$r_1 = s \tan \frac{A}{2}.$$

(ii) Prove that

$$(r_1 - r)(r_2 - r)(r_3 - r) = 4Rr^3.$$

3. (i) Prove that

$$\tan^{-1} \sqrt{\frac{a(a+b+c)}{bc}} + \tan^{-1} \sqrt{\frac{b(a+b+c)}{ca}} + \tan^{-1} \sqrt{\frac{c(a+b+c)}{ab}} = \pi.$$

(ii) Prove that

$$\tan^{-1} n + \cot^{-1} (n+1) = \tan^{-1} (n^2 + n + 1).$$

4. (i) Find the sum of the sines of a series of angles, the angles being in arithmetical progression.

(ii) Sum to  $n$  terms the series

$$\sin (p+1) a \cos a + \sin (p+2) a \cos 2a + \dots,$$

5. (i) Assuming the relation

$$(\cos a + i \sin a)^n = \cos na + i \sin na$$

where  $n$  is an integer, positive or negative, prove that  $\cos na + i \sin na$  is one of the values of  $(\cos a + i \sin a)^n$  where  $n$  is a fraction, positive or negative.

(ii) Prove that

$$\cos \left( \frac{n\pi}{2} - na \right) + i \sin \left( \frac{n\pi}{2} - na \right) = \left( \frac{1 + \sin a + i \cos a}{1 + \sin a - i \cos a} \right)^n,$$

where  $n$  is an integer.

6. (i) Assuming the binomial theorem for complex quantities, and De Moivre's theorem, where  $n$  is a positive integer, expand  $\cos a$  in ascending powers of  $a$ .

(ii) Prove that

$$\sin^2 a \cos a = a^2 - \frac{5}{6} a^4 + \dots + (-1)^{n+1} \frac{3^{2n} - 1}{4 \cdot 2n} a^{2n} + \dots$$

### GROUP B

7. (i) Find the condition that three straight lines may meet in a point.

(ii)  $ABC$  is a given triangle, and  $B'C'$  any straight line parallel to  $BC$  meeting  $AB$  and  $AC$  at  $B'$  and  $C'$  respectively. Prove that the straight lines  $BC$  and  $BC'$  meet on the straight line  $AD$ ,  $D$  being the middle point of  $BC$ .

8. (i) Find the equation to the two straight lines joining the origin to the points where the straight line  $lx + my = n$  meets the curve

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0.$$

If the axes be rectangular, find the condition that the two straight lines may be at right angles.

(ii) The axes being rectangular, find the equation to the pair of straight lines meeting at the origin which are perpendicular to the pair given by the equation

$$ax^2 + 2hxy + by^2 = 0.$$

9. (i) Prove that the equation

$$x^2 + y^2 + 2gx + 2fy + c = 0$$

represents a circle. Find its centre and radius.

(ii) Prove that the locus of the middle points of such chords of a circle as pass through a fixed point is a circle.

10. (i) Find the condition that the straight line  $y = mx + c$  may touch the parabola  $y^2 = 4ax$ .



(ii) Two equal parabolas have the same vertex, and their axes are at right angles ; prove that the common tangent touches each at the end of a latus rectum.

11. (i) Find the equation to the polar of the point  $(x_1, y_1)$  with respect to the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

(ii) Prove that the locus of the poles of such chords of an ellipse as touch a concentric and coaxial ellipse, is another concentric and coaxial ellipse.

12. (i) Find the equation to the pair of asymptotes of the hyperbola

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

(ii) Find the equations to the two asymptotes of the curve

$$2x^2 + 5xy + 2y^2 + 4x + 5y = 0 ;$$

and find the general equation of all hyperbolas having the same asymptotes.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions, ONE at least being chosen from EACH group.*

### GROUP A

1. Define the 'differential coefficient' of  $f(x)$  with respect to  $x$ , and determine directly from your definition the differential coefficients with respect to  $x$  of  $\sin x$  and  $\sin^n x$  where  $n$  is a positive integer.

Show that the differential coefficient of

$$y = \left( \frac{x}{1 + \sqrt{1-x^2}} \right)^n,$$

with respect to  $x$ , is  $\frac{ny}{x\sqrt{1-x^2}}$ .

2. If the curve  $y=f(x)$  has a tangent at the point  $x$ , inclined to the  $x$ -axis at an angle  $\theta$ , show that

$$\frac{dy}{dx} = \tan \theta.$$

Draw a neat diagram for the proof of the above, containing the tangent at  $x$  and constructions, and point out all the *infinitesimals* in the diagram.

Find at what points on the curve

$$y = (x-3)^2(x-2)$$

the tangent is parallel to the  $x$ -axis.

3. Expand each of the functions  $\sin x$  and  $\tan x$  to three terms by Maclaurin's theorem.

Show that for values of  $x$  so small that the fourth and higher powers of  $\frac{x}{a}$  may be neglected, the catenary

$$y = \frac{1}{2}a(e^{x/a} + e^{-x/a})$$

may be replaced by a parabola.

State without proof the first three terms in the expansion of  $f(a+h)$  in powers of  $h$  by Taylor's theorem. What is Lagrange's remainder form after  $n$  terms of the above expansion?

4. Prove that when  $y$  is a maximum or a minimum  $\frac{dy}{dx}$  vanishes, but that if  $\frac{d^2y}{dx^2}$  vanish  $y$  is not necessarily a maximum or a minimum.

Find the maximum and minimum values of  $y$  where

$$y = x^3 - 3x.$$

#### GROUP B

5. Define  $\int_a^b \phi(x) dx$ , where  $b > a$ , as the limit of a sum.

Evaluate  $\int_0^1 x^2 dx$  as the limit of a sum.

Show that  $\int_a^b \phi(x) dx$  represents a certain area.

6. Work out the following integrals:

$$(i) \int \tan^2 \theta d\theta,$$

$$(ii) \int \frac{x^2 dx}{x^3 - 4},$$

$$(iii) \int \frac{dx}{\sqrt{x^2 + a^2}}.$$

7. Evaluate:

$$(i) \int_0^\infty \frac{dx}{1+x^4},$$

$$(ii) \int_0^1 \sin^{-1} x dx,$$

$$(iii) \int_0^\infty e^{-x} \cos x dx.$$

## GROUP C

8. Solve the following equations :

$$(i) \quad \frac{dy}{dx} + y = x ;$$

$$(ii) \quad x + y \frac{dy}{dx} = 2y ;$$

$$(iii) \quad (y-x) dy + y dx = 0.$$

9. Solve the following equations :

$$(i) \quad \frac{dy}{dx} \cos x + y \sin x = 1 ;$$

$$(ii) \quad \frac{dy}{dx} + \frac{1-2x}{x^2} y = 1 ;$$

$$(iii) \quad x \frac{dy}{dx} + y = y^2 \log x.$$

10. Solve the following :

$$(i) \quad \frac{d^2 y}{dx^2} + 5 \frac{dy}{dx} + 4y = 0 ;$$

$$(ii) \quad \frac{d^2 y}{dx^2} + 4y = x^2.$$

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Any six questions carry fully marks.*

*Not more than FOUR from either group should be attempted.*

## GROUP A

1. Find the specific gravity of a mixture of given weights of different substances whose specific gravities are also given.

The specific gravity of a mixture of equal volumes of two substances is  $s_1$  and that of a mixture of equal weights of the same substances is  $s_2$ . Determine the specific gravities of the two substances.

2. Prove that the pressure of a heavy homogeneous liquid at all points in the same horizontal plane is the same, and that the difference of pressure at any two points varies as the difference of their depths.

Three fluids whose densities are in arithmetical progression fill a semicircular tube whose bounding diameter is horizontal. Prove that the depth of one of the common surfaces is double that of the other.

3. Find the centre of pressure of a triangle whose base is horizontal and vertex in the surface of a homogeneous liquid, not exposed to pressure.

Show that the centre of pressure of a parallelogram immersed in a liquid with one angular point in the surface and one diagonal horizontal, lies in the other diagonal and is at a depth equal to  $\frac{1}{3}$  of the depth of its lowest point.

4. Find the conditions of equilibrium satisfied by a solid floating freely in a fluid.

A square lamina is placed vertically in a fluid of double its density ; prove that it can rest only with an edge or diagonal vertical.

5. Describe a Nicholson's hydrometer. What are its uses? What is its chief point of difference from a common hydrometer?

Describe Bramah's hydraulic press, explaining the hydrostatic principle which is utilized in it.

6. Enunciate Boyle's law, and show how it can be verified experimentally.

Find the height of one station above another by means of barometric observations.

#### GROUP B

7. Define—celestial meridian, prime vertical, celestial latitude, hour angle.

Calculate what would be the declination and right ascension of the sun on 21 April, if the changes in these quantities were uniform throughout the year.

Define the latitude of a place, and show how it can be determined by the observations of the transits of a circumpolar star over the meridian.

8. Find the coefficient of refraction by observing the apparent zenith distances of two circumpolar stars at their transits above and below the pole.

An altitude of a star is observed, and found to be the angle whose sine is  $\frac{5}{13}$  ; calculate the true position of the star, assuming the amount of refraction at an altitude of  $45^\circ$  to be  $58'2''$ .

9. Explain what is meant by twilight, and prove that the duration of twilight depends upon the latitude of the place and the declination of the sun.

Find the condition that the twilight will last all night at a place. State, giving reasons, if twilight can last all night at a place whose latitude is  $48^\circ$ .

10. Explain the effect of aberration on the position of a star, and prove that aberration varies as the sine of the earth's way.

Prove that, due to aberration, a star situated at the pole of the ecliptic will, in the course of a year, appear to revolve round its true position in a circle.

11. Explain the phenomenon of the harvest moon.

Find the minimum and the maximum number of eclipses of the sun in a year.

12. What is the equation of time? Show that it vanishes four times a year.

The longitude of Paris is  $2^\circ 20'$  E., and the longitude of Dublin is  $6^\circ 40'$  W. Find the time at Dublin when it is 12 h. 6 m. at Paris.

Explain the principle on which a sun-dial is constructed.

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Answer any FIVE questions.*

1. Explain any method of determining the mean density of the earth. Show how its value enables us also to calculate the mass of the sun if we assume the mean time of the earth's annual revolution, and the mean distance of the sun from the earth as known.

2. A uniformly thick square lamina of homogeneous material is oscillated round an axis perpendicular to the plane and passing through one of the angular points. Calculate the periodic time of small oscillations.

3. Define Young's modulus  $E$ , modulus of rigidity  $\mu$ , and Poisson's ratio  $\sigma$ . Calculate the Poisson's ratio for a uniform and isotropic material in terms of  $E$  and  $\mu$ .

4. Define surface tension and angle of contact.

How would you determine the two quantities in the case of mercury?

5. Explain the origin of viscosity of a gas. Show that it is independent of gas pressure.

How would you proceed to determine experimentally the viscosity of air at any temperature?

6. Derive an expression for the velocity of sound in gases. How does the motion of the source of sound affect the apparent pitch of a note?

Describe any method of determining the velocity of sound in air.

7. Discuss the dependence of frequencies emitted by a plucked string on the tension, length, and the material of the string, as well as on the position of the point of plucking.

How would you proceed to verify your theoretical conclusions?

8. Write short notes on any TWO of the following :—

- Summation and difference-tones.
- Vowel sounds and sound reproduction.
- Interference, reflection, and refraction of sound.
- Quality and pitch of a musical note.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Six questions are to be attempted.*

1. Deduce an expression for the rate of radial flow of heat in a cylinder.

Calculate the loss of heat per unit length of a steam-pipe covered with a non-conductive coating 2 cm. thick, when—

- (a) the temperature of the pipe is 200°C.,
- (b) the temperature of the outer surface is 50°C.,
- (c) conductivity of the material is  $0.19 \times 10^{-3}$ ,
- (d) outside diameter of the steam-pipe is 8 cm.

2. Write a short note on the ratio of specific heats of gases, and state how one can ascertain the constitution of molecules from the data.

3. Deduce from thermodynamic principles the formula

$$C_v = C_p - T \left( \frac{\partial v}{\partial T} \right)_p \left( \frac{\partial p}{\partial T} \right)_v,$$

where  $C_v$  and  $C_p$  are the specific heats of a substance measured under constant volume and constant pressure respectively. Explain carefully each step in your deduction.

4. Calculate the latent heat of evaporation of calcium from the following data on the assumption that the latent heat is independent of temperature:—

Vapour pressure in mm. of Hg.	4,	6,	23,	41,	49,	99
$t^\circ$ in centigrade	960,	988,	1021,	1039,	1079,	1092

Deduce the necessary formula.

5. Explain the meaning of the term 'temperature of inversion' in connexion with the Joule-Kelvin porous plug experiment.

Show that for a substance obeying van der Waals' equation

$$T = \frac{2a}{R} \left( \frac{V-b}{V} \right)^2,$$

where  $T$  is the temperature of inversion,  $V$  is the corresponding volume  $R$ ,  $a$ ,  $b$ , the constants in van der Waals' equation.

6. Explain how the entropy of a system remains constant in a reversible process and that it increases if the process is irreversible.

7. Explain clearly how one would calculate the root mean square velocity of the molecules of a perfect gas.

Calculate the velocity of the molecules of argon gas at 1 mm. pressure of mercury from the following data:—

Density of argon = 1.78 grams per litre at 760 mm. of mercury.

Density of mercury = 13.6 grams per cubic centimetre.

8. Write a short note on:—(a) critical temperature, (b) critical pressure, (c) critical volume of a gas, stating your views about the state of matter near the critical point.

9. The atomic heat of carbon is abnormally low at ordinary temperature. Discuss any theory which explains this anomaly.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. Describe, in detail, any method of measuring accurately the velocity of light in air.

2. Describe the different parts of a modern microscope. On what factors do its magnifying power and its resolving power depend?

3. What is 'chromatic aberration'? How is it eliminated in the object glass of a good telescope?

4. Explain Huyghens' principle.

Calculate, on the basis of the principle, the intensity of light at the centre of the shadow cast by an opaque sphere, due to a distant point source of light.

5. A thin plane parallel plate of glass, thinly silvered on both sides, is held close to the eye, and a distant white screen, illuminated with sodium light, is viewed through it. Describe the nature of the interference fringes that would be observed.

How are they different from Newton's rings?

6. A distant point source of light is viewed through a telescope having a narrow rectangular aperture. Describe and explain the diffraction pattern that would be observed.

7. Given a thin plate of a uniaxial crystal cut parallel to its optic axis, explain how you would determine its two principal refractive indices.

8. Describe the construction of a Babinet compensator, and explain how it can be used for analysing elliptically polarized light.

9. What is 'anomalous dispersion'? Sketch an experimental arrangement for demonstrating it.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Six questions to be attempted.*

1. Describe a method of measuring accurately the absolute unit of electric charge.

A charged mercury droplet is balanced in the electric field of a parallel plate condenser whose plates are 1 cm. apart and are maintained at a difference of potential of 3,000 volts. When the field is short circuited, the droplet falls with a velocity of 0.03 cm. per second. Find the value of the charge on the latter, given the density of mercury to be 13.6, the value of  $g=980$ , and the coefficient of viscosity of air at 19° C. to be  $1.83 \times 10^{-4}$ .

2. An insulated sphere of radius  $R$  is placed in a uniform electric field of intensity  $E_0$ . Find the value of the surface density of charge induced on the sphere, and of the electric intensity at a point outside it.

3. Give an account of the influence of temperature on metals and semi-conductors. What is supraconductivity?

What is the length of tungsten wire in an incandescent lamp, if the lamp consumes 50 watts at 220 volts, and the diameter of the wire is 0.025 mm.? The temperature of the wire is 2500° abs., and the specific resistance of tungsten, which can be taken proportional to the absolute temperature, is  $0.056 \times 10^{-4}$  at 18°C.

4. Give an account of the different types of galvanometers, their constructions and applications, together with an elementary account of the theory of their working.

5. Deduce the condition of balance of the general form of Wheatstone's Bridge (in which each arm can have some capacity and self induction, in addition to resistance). Give some examples of the practical applications of the above.

6. Find the dimension of capacity in the electrostatic and the electromagnetic system of units.

Describe an experimental method of measuring the values of a given capacity in the two systems of units. What is the importance of such measurements?

7. Describe an experimental arrangement for demonstrating the oscillatory nature of the discharge of a charged condenser, and the electric waves produced by it in the surrounding medium. Show also that these waves have the same essential properties as light waves.

8. How has it been experimentally shown that  $\alpha$ -particles are helium nuclei with two units of positive charge?

9. Give an account of the principal characteristic properties of a ferromagnetic body. How has ferromagnetism been accounted for in terms of the paramagnetic properties of the atomic constituents of the body?



## PHYSICS—PASS

*Paper-setters*— { DR. BRAJENDRANATH CHUKERBUTTI, D.Sc.  
MR. TULSIDAS KAR, M.A.

*Examiners*— { MR. DWIJENDRAKUMAR MAJUMDAR, M.A.  
,, DWARKANATH MUKHERJEE, M.Sc.  
,, GANGADHAR MUKHERJEE, M.A.  
,, ABINASCHANDRA SAHA, M.Sc.  
,, JITENDRANATH SEN, M.A.  
,, PRAMODCHANDRA SEN, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Only six questions to be attempted.*

1. What do you understand by the 'gravitational potential' due to a material body at a point outside it?

Find an expression for the potential due to a thin hollow sphere of uniform surface density at a point outside it.

2. Explain the terms—'stress', 'strain', 'Young's modulus' and 'Poisson's ratio'.

A steel wire of length 2 metres and of diameter 0.52 mm. is suspended from an unyielding support and loaded with 5 kilogrammes. An elongation of 2.31 mm. is observed. Calculate the coefficient of longitudinal elasticity of steel.

3. State Boyle's law for gases. Give a brief account of the experiments performed to verify it for high pressures, indicating the important results obtained.

4. Clearly distinguish between the specific heat at constant pressure and that at constant volume of a gas.

Describe an accurate method for measuring the specific heat of a gas under constant pressure, deducing the formula to be used.

5. State the first law of thermo-dynamics. Why is its verification by Joule considered to be of the utmost importance in the establishment of the law of conservation of energy?

Describe Joule's or any other accurate experiment for finding the mechanical equivalent of heat, giving all essential details.

6. State clearly the fundamental assumptions of the kinetic theory of gases. Deduce from it Boyle's and Charles's laws for perfect gases.

7. Define the magnifying power of a telescope. Give a neat diagram of an astronomical telescope, showing the paths of the principal rays. How is its magnifying power for infinity practically determined?

8. Clearly explain Huyghens' principle and deduce the law of refraction from it. What is meant by refractive index, and how is it related to the velocities of light in different media?

9. A thin pencil of plane polarized light is allowed to be incident normally on a calcite plate cut parallel to the optic axis. Explain what is observed when the plate is rotated about the pencil of light as axis.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Only six questions are to be attempted.*

1. Explain fully what you mean by a musical scale and the 'interval' between the musical notes.

State briefly how the intervals in a diatonic scale are classified.

2. Describe in detail an experimental arrangement for the determination of the velocity of sound in gases at different temperatures and pressures.

How does the velocity vary with pressure? Give reasons for your answer.

3. Distinguish between the magnetic intensity ( $H$ ) and the induction ( $B$ ) inside magnetic matter. How are they related to the magnetization ( $I$ )? Describe a method of measuring permeability of a magnetic substance.

4. Describe some form of absolute electrometer, and give the theory of its action.

5. What is a condenser, and why is it so called?

In a parallel plate condenser, with air as the dielectric, a glass plate of thickness  $t$  is inserted into the air space of thickness  $d$  between the conducting plates. If the area  $A$  of the glass plate is the same as that of the plates of the condenser, calculate the change in capacity of the condenser.

6. State the laws governing the distribution of current in a network of wires.

A battery of 6 volt E.M.F. and 0.5 ohm internal resistance is joined in parallel with another battery of 10 volt E.M.F. and internal resistance 1 ohm, and the combination is used to send current through an external resistance of 12 ohms. Calculate the current through this resistance.

7. What is an earth-inductor? Explain how it can be employed for the determination of the total intensity of the earth's magnetic field.

8. Give a brief account of the principal properties of cathode rays.

How can you show that they are negatively charged particles of small mass?

9. Write short notes dealing with the contributions of the following men of science to electro-magnetism:—(a) Faraday, (b) Maxwell, (c) Hertz.

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## CHEMISTRY—HONOURS

*Paper-setters*— { PROF. JNANENDRACHANDRA GHOSH, D.Sc.  
 " JNANENDRANATH MUKHERJEE, D.Sc.  
 " PRAPHULLACHANDRA MITTER, M.A., Ph.D.  
 HEMENDRAKUMAR SEN, D.Sc.

*Examiners*— { DR. DHIRENDRANATH CHAKRABARTI, Ph.D.  
 MR. ANANDAKISOR DAS, M.A.  
 " ASUTOSI MAITRA, M.A.  
 " DHIRENDRANATH MOOKERJEE, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt FIVE questions only.*

1. Give an account of the development of organic chemistry due to the contributions of Liebig and Woehler, Dumas, and Laurent and Gerhardt.
2. Write what you know about the chemistry of oleic acid. How is the position of the double-bond in it determined?
3. You are given a substance containing besides carbon and hydrogen only one oxygen containing function. How would you proceed to determine the exact nature of the function?
4. Give an account of the methods of preparation, properties, and reactions of the quinones.
5. How are the following substances prepared:—(a) phorone, (b) tetramethylenediamine, (c) cyanamide, (d) cinnamic aldehyde, (e) phenyl propionic acid, (f) benzil?
6. Give an account of the isomerism of the oximes. What theories have been advanced to account for it? How is configuration determined in each case?
7. Write a short essay on the Diazo-reaction.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Attempt only FIVE questions.*

1. (a) Discuss the use of hydrogen sulphide as an analytical agent from the standpoint of the electrolytic dissociation theory.  
 (b) Give an account of the compounds of sulphur with (i) hydrogen, and (ii) halogens.

2. Compare the physical and chemical properties of the following metals:—Mg, Ca, Sr, Ba, Zinc, Cd, and Hg.
3. Give an account of the hydrides and nitrides of the more important metals, and discuss what happens when the hydrides are electrolysed.
4. Discuss, with equations, the reactions which take place when salts of the following metals are treated with an excess of potassium cyanide.—Ag, Cu, Zn, Fe, Au, and Hg. Arrange the above elements in the order of their electrolytic solution tension in a normal solution of potassium cyanide.
5. Discuss the valency of the metal atom in the following ions:—permanganate, dichromate, phosphate, cobaltinitrite, ferrocyanide, and ferricyanide.
6. Write notes on the following:—ironcarbonyl, potassium percarbonate, superphosphate, carborundum, polythionate.
7. Discuss the statement that the atomic number is a more fundamental characteristic for an element than its atomic weight.
8. (a) Discuss, with equations, what happens when chlorides of some typical elements are boiled with water.
- (b) Give some typical examples of the reactivity of oxygen at room temperature.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Not more than FIVE questions need be attempted.*

1. Explain Graham's law of diffusion from the standpoint of the kinetic theory of gases, and show how the relative densities can be obtained from the rates of diffusion. Calculate the average velocity and the kinetic energy of a molecule of carbon monoxide at 30°C. [ $R = 0.0821$  litre-atmospheres;  $N$  (Avogadro's number)  $= 6.06 \times 10^{23}$ .]
2. What are the properties characteristic of the crystalline state? Write a short account of the contributions made to chemistry from a study of the crystalline state.
3. What is meant by the following:—(a) specific rotatory power and molecular rotation, (b) molecular and atomic refractivities? Of what interest are their measurements to students of chemistry?
4. Write notes on the following:—(a) eutectic mixtures, (b) critical solution temperatures, (c) polymorphism.  
Give examples and diagrams by way of illustration.
5. (a) State Le Chatelier's principle. Discuss the effect of increasing the volume and temperature on the equilibrium in the following systems:—
  - (i)  $I_2 \rightleftharpoons I + I$ ;
  - (ii)  $2HI \rightleftharpoons I_2 + H_2$ .
- (b) What do you understand by chemical affinity?
6. (a) Describe fully a method for determining the molecular weight of a non-volatile non-electrolyte. Give the equations on which the calculations are based.

(b) The constant (freezing-point depression) for water is 18.9 for 100 grams of solvent. 1.5 grams of a solute when dissolved in 20 grams of water lowered the freezing-point by  $0.416^{\circ}\text{C}$ . What is the molecular weight of the solute?

7. Describe in detail how you would proceed to determine the hydrogen ion concentration of a mixture of acetic acid and sodium acetate in aqueous solution. Explain why such mixtures are called 'buffer' solutions.

8. Explain, with illustrations, what is meant by the following:—  
(a) lyophobic and lyophilic colloids, (b) adsorption.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Answer FIVE questions only.*

1. What happens when steam is passed over red-hot coke? How is the reaction affected by variation of the temperature of the coke? How is the *equilibrium constant* of the reaction determined?

2. What are the more important minerals from which radium can be obtained? Describe the extraction of radium bromide, and ultimately of the metal itself. State their more important properties.

3. Enumerate the more important methods used for the manufacture of sulphuric acid by the *contact process*, and describe with the help of a neat sketch, and without omitting essential details, any ONE of them. What physico-chemical considerations underlie the manufacture of sulphuric acid by this process?

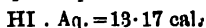
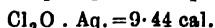
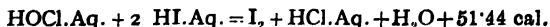
4. Write notes on any FIVE of the following:—(a) space-velocity, (b) freezing-point curve of an alloy and its various characteristic features, (c) principle of steam-distillation, (d) 'crackling', (e) silica gel, (f) permutite, (g) liquefaction of coal, (h) monel metal, (i) Avogadro number.

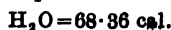
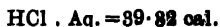
5. What are the rare gases of the atmosphere? How are they separated from one another? Mention the more important technical uses to which some of them are being put.

6. How is phosphorus manufactured nowadays? State clearly how you would separately prepare from phosphorus specimens of phosphorus acid, orthophosphoric acid, and hypophosphorous acid. How may these acids be recognized qualitatively? What structural formula would you give to orthophosphoric acid, and for what reasons?

7. (a) A set of silver refinery vats have energy equivalent to one horse-power applied to them at an average pressure of 3.7 volts per vat. How much silver will be deposited per hour?

(b) From the following data, determine the heat of formation of chlorine monoxide:—





8. How would you prepare the following substances on a large scale, and what are their principal uses:—(a) alizarine, (b) sodium cyanide, (c) potassium permanganate, (d) calcium carbide, (e) nitro-glycerine, (f) nickel carbonyl, (g) formic acid?

## CHEMISTRY—PASS

<i>Paper-settlers</i> —	{	MR. PRIYADARANJAN RAY, M.Sc. DR. JOGENDRACHANDRA BARDHAN, D.Sc.
<i>Examiners</i> —	{	MR. PHANIBHUSHAN CHATTERJEE, M.A. " RABINDRANATH CHATTERJEE, M.Sc. DR. SUBODHKUMAR MAJUMDAR, M.Sc., Ph.D. MR. HARIDAS MOOKERJEE, M.A. DR. TARINICHARAN CHAUDHURI, M.A., Ph.D. MR. PRIYABRATA SARKAR, M.A.

### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Not more than SIX questions should be attempted.*

1. State the laws of osmotic pressure. The osmotic pressure of a 2 per cent. solution of acetone in water is 590 cm. of mercury at  $10^\circ$ . What is the molecular weight of acetone?
2. Explain with illustrative examples any FOUR of the following:—(a) polymerization, (b) racemic mixture, (c) Wurtz-Fittig synthesis, (d) Sandmeyer's reaction, (e) pinacone, (f) osazone.
3. Describe a convenient method of making acetic anhydride in the laboratory. In what important particular does it differ from ethyl acetate? How would you obtain a specimen of *pure* ethyl acetate from acetic anhydride?
4. How are the following substances obtained, and what are their characteristic reactions:—(a) acetaldehyde, (b) ethylene, (c) anhydrous hydrocyanic acid, (d) urea, (e) nitrobenzene?
5. Discuss briefly the methods which you would employ to determine the mode of combination of the nitrogen atom in a substance having the molecular formula  $\text{C}_5\text{H}_5\text{N}$ .
6. Outline a method for the production of oxalic acid on a large scale, and illustrate its various uses. What is the action of (a) glycerol, (b) concentrated sulphuric acid, and (c) phosphorus pentachloride upon oxalic acid? Give equations.
7. What evidence is there to justify the assumption that the six hydrogen atoms in benzene are equivalent? How would you show that toluene, aniline, and phenol are all derivatives of benzene?
8. Write a connected account, not exceeding FIVE pages of script, of some topic in physical chemistry which has specially interested you.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Only SIX questions are to be attempted.*

1. Give a short account of Arrhenius's theory of electrolytic dissociation. Compare the characteristics of electrolytic dissociation with those of gaseous dissociation, giving examples to illustrate your answer. What is meant by the degree of dissociation, and how is it determined?

2. State Graham's law of diffusion, and show how it can be deduced from the kinetic theory of gases.

Ladenburg found that a sample of ozonized oxygen containing 86.16 per cent of ozone by weight required 430 seconds to diffuse under conditions where pure oxygen required 367.5 seconds. Determine the density of ozone.

3. Write short notes on any THREE of the following:—(a) isotopes, (b) hydrolysis, (c) double salts, (d) oxidation and reduction.

4. Compare the physical and chemical properties of the halogen elements, with special reference to their modes of formation and typical compounds. Describe the respective action of chlorine, bromine, and iodine upon an aqueous solution of sodium thiosulphate.

5. What are, most probably, the highest valency states of chromium, nickel, sulphur, manganese, and lead? Give experimental evidences in support of your answer.

6. Explain the following phenomena, giving equations to illustrate the reactions that occur:—

(a) The colour of a potassium permanganate solution is slowly discharged to begin with, when it is dropped into a mixture of oxalic and sulphuric acid solutions; that is, however, followed readily by rapid decolorization.

(b) When chlorine is passed into a solution of potassium iodide, the colour of the solution rapidly becomes brown; on continued passage of chlorine, this brown solution turns colourless again.

(c) When ammonia is added to a solution of copper sulphate, a bluish-green precipitate is first formed, which dissolves to a deep blue solution on addition of more ammonia. The blue colour of the solution is, however, discharged by the addition of potassium cyanide.

7. Starting with sodium chloride, how are the following substances prepared on a large scale:—sodium hydroxide, sodium carbonate, sodium hypochlorite, sodium chlorate, and chlorine?

How would you test for free chlorine in a solution containing sodium chloride and sodium chlorate?

8. How does zinc occur in nature, and what other metal is usually associated with it? Describe the method of extracting zinc in a pure state from its ores.

Name the important alloys of the metal, and state their uses.

## BOTANY—HONOURS

*Paper-setters—* } PROF. S. P. AGHARKAR, M.A., PH.D.  
 } DR. HARAPRASAD CHAUDHURI, PH.D.  
 } PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.  
 } MR. P. PARIJA, M.A., I.E.S.

*Examiners—* } PROF. S. P. AGHARKAR, M.A., PH.D.  
 } DR. SAHAYRAM BOSE, PH.D.  
 } PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.  
 } MR. KALIPADO BISWAS, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Illustrate your answers by suitable sketches.*

*Answer any FIVE questions.*

1. Describe in detail the structure of the seed in the Gramineae, and discuss the views held regarding the structure or structures representing the cotyledon.

2. Give a short account of the development of the dicotyledonous embryo as found in *Capsella* or any other type, specially pointing out the stages at which the principal tissue systems begin to be differentiated.

3. Give a general account of the influence of an aquatic habitat on the anatomical structure of flowering plants, illustrating your answer by examples from the Bengal flora.

4. Give a short account of the modes of pollination in flowering plants, and describe, with labelled sketches, the mechanism of pollination in any two species you have studied.

5. Give a general account of the range of floral structure in the Scitamineae, illustrating your answer by properly labelled sketches. Mention any plants of economic importance belonging to the group.

6. Give the general characters of the Umbelliferae, and point out those which are of systematic importance. Name the principal economic plants belonging to the family, and give their geographical distribution.

7. The Rubiaceae and Compositae are said to be the most highly developed families of dicotyledons. Point out the characters on which this view is based.

8. Write a short essay on the geographicobotanical divisions of India, and describe the main features of vegetation of any ONE of these.



## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer FIVE questions only, attempting not more than TWO from any one section.*

## SECTION I

1. Name the common genera of the filamentous green and blue-green algae occurring in Bengal. Describe briefly the characters of any two forms from each group, giving illustrative sketches. 20
2. Outline briefly the characters of the family to which *Volvox* belongs, and describe its life-history in detail, giving neat diagrams. 20
3. Give a brief account of the *Desmidiaceæ*, and describe an un-constricted form in detail. Give neat drawings. 20
4. Write an illustrated account of *Dictyota dichotoma*. What light does it throw on the phenomenon of alternation of generations in the higher plants? 20

## SECTION II

5. Giving neat sketches, describe the process of sexual reproduction in *Zygomycetes*, and explain why zygospores are not frequently found in many species. 20
6. Give an illustrated account of the life-history of *Puccinia graminis*, mentioning specially the developmental stages in the formation of aecidiospores. 20
7. Follow in detail the sexual process in any *Ascomycetes* leading to the formation of the ascus and the ascospores. 20

## SECTION III

8. Describe the structure of the sporogonium of *Anthoceros*, and discuss its bearing on the question of origin of the higher plants. 20
9. Give a brief description of the sex organs of *Marchantia*, and compare them with those of *Funaria*. 20
10. Describe the mode of dehiscence of the capsule and spore discharge in any two of the mosses. 20

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer only FIVE questions.*

1. Discuss the relation existing between the function of respiration in plant organs and the structure of their ventilating system.

2. Explain how the development of the vessels and tracheides in a plant may be influenced by the climatic and edaphic conditions to which it is exposed.
3. Discuss the functions of (a) sieve-tubes, and (b) latex-tubes.
4. Give an account of the principal types of hydathodes and their function.
5. Are the products of photosynthesis immediately used up? If not, what happens to them? What factors determine the rate of utilization of synthetic products in plants?
6. Describe the features that must be present in all types of absorbing organs in plants.
7. Write an essay on plant-formations.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions are of equal value.*

*Answer any FOUR questions.*

1. Illustrate by means of neat sketches and brief notes the peculiarities of the stelar structure of Pteridosperms.
2. What light does the study of Pteridophytes and Pteridosperms throw on the evolution of the seed?
3. Discuss briefly the affinities of the Cordaitales with other groups of the gymnosperms.
4. Compare and contrast the living and fossil Lycopods.
5. Draw a series of sketches to illustrate the diversity and line of advancement of the male strobilus among the gymnosperms you have studied.
6. Explain the Mendelian scheme of inheritance. Illustrate your answer by the behaviour of one pair of Allelomorphs.
7. Discuss briefly the present position of the theory of natural selection.

#### BOTANY—PASS

*Paper-setters—* { DR. SYED HEDAYETULLAH, M.Sc., Ph.D.  
 „ PRAPHULLANATH GHATAK, M.Sc., Ph.D.(LOND.),  
 D.I.C.

*Examiners—* { SRIMATI SAROJINI DATTA, M.A.  
 MR. KALIPADA BISWAS, M.A.  
 „ ANUTOSH DASGUPTA, M.A.  
 „ GIRIJAPRASANNA MAJUMDAR, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. What is cambium? Explain, with sketches, the result of its activity in the stem and root of a dicotyledon at the end of four years. Give also a brief account of the occurrence and activity of cambium in monocotyledons. 20

2. *Either*, Write an essay on the androecium with special reference to its importance in the systematic arrangement of the flowering plants. 20

*Or*, State the systematic position of FIVE important fruit-trees grown in Bengal. Write a short account of their cultivation.

3. *Either*, What is a floral diagram? Explain the method of its construction. Draw FIVE floral diagrams of species that you have studied representing the following families of plants:—Sterculiaceae, Anacardiaceae, Leguminosae, Labiatae, Gramineae. 20

*Or*, Describe with neat sketches, the floral structure of an orchid flower, and compare it with that of a zingiber. Give floral diagrams and formulae.

4. *Either*, Describe, with neat sketches, the development of embryos in a dicotyledon, and trace its homology in the evolution of the gametophyte. 20

*Or*, Give a comparative account of a cycad and a pine that you have studied.

5. *Either*, Write a short account of any botanical excursion that you have made, with special reference to the following points:—outfit, locality, season, method of collection and preservation, floristic account and general impression of the vegetation. 20

*Or*, What is Systematic Botany? What is its aim? Advance arguments to show how far its aim has been fulfilled by the introduction of a modern system of classification in the place of older systems.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer Question 5 and any FOUR other questions.*

*Illustrate your answers by neat sketches where necessary.*

1. Write an account of the sexual phenomena as observed in the various groups of green algae. 20

2. What do you understand by alternation of generations? To what extent is the phenomenon exhibited in the Thallophyta? 20

3. Describe the life-history of Marchantia, and compare the structure of its sporophyte with that of a moss. 20

4. Write a comparative account of the sporophytes of *Lycopodium* and *Selaginella*. 20
  5. Write an essay on the influence of light on plant life. 20
  6. What do you understand by 'grand period of growth'? Describe an apparatus to record this phenomenon in plant life. 20
  7. Write an essay on symbiosis in plants, with special reference to Leguminosae. 20
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## PHYSIOLOGY—HONOURS

DR. U. N. BRAHMACHARI, RAI BAHADUR, M.A.,  
M.D., Ph.D., F.A.S.B.

*Paper-setters—* { PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc., F.R.S.E.  
DR. RUBDENDRAKUMAR PAL, M.B., D.Sc., M.R.C.P.  
SIR NILRATAN SIRCAR, Kt., M.A., M.D., LL.D., D.C.L.

*Examiners—* { MR. NARENDRACHANDRA BASU, M.Sc.  
,, NIBARANCHANDRA BHATTACHARYYA, M.A.  
PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc. F.R.S.E.  
DR. BIJALIBIHARI SARKAR, D.Sc.

### FIRST PAPER

*Three questions are to be attempted.*

1. Give your views regarding the causation of heart beat. Discuss the relation of Coronary flow to Arterial pressure and to Pulmonary circulation.
  2. Give an account of the recent methods of classification of leucocytes, dealing particularly with the significance of changes in their nuclei.
  3. Discuss in detail the chemical regulation of Respiration.
  4. Give a detailed account of blood pressure in the (1) arteries, (2) veins, (3) capillaries of the skin, and (4) capillaries of internal organs, discussing the mechanism of its maintenance.
- 

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Not more than four questions are to be attempted.*

1. Discuss the significance of the double nerve-supply to the glands and the energy involved in the act of their secretion.
  2. Discuss the functions of the renal tubules and glomeruli, their adaptation, and the work done by the kidney.
  3. Write what you know about the vascular responses of the skin.
  4. Discuss the action of the various enzymes concerned in digestion.
  5. Write what you know about the temperature and regulation of heat production of the human body and the nervous mechanism for its heat regulation.
-

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer only FOUR questions.*

1. Describe the histology and functions of the parathyroid gland. Give an account of the chemistry of thyroid secretion.
  2. Give an account of the physiological changes during starvation.
  3. Write an essay on 'fatigue'.
  4. Discuss, in brief, the inter-relationship between the protein, carbohydrate, and fat metabolism.
  5. Write short notes on the following:—(a) phosphagen, (b) law of isochronism, (c) muscle tone, (d) receptor substance, (e) Nissl's granules.
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## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer only FOUR questions.*

1. Discuss the nature of the nerve impulse.
  2. Compare the respective extent of control exerted by the pyramidal tracts and the rubrospinal tracts in (a) man, and (b) animals. What is the nature of the control?
  3. Discuss the functions of the optic thalamus.
  4. Describe the three orders of neurones concerned in auditory sensations and compare them with those of the sensory tracts for touch.
  5. Give an account of 'visual purple' and discuss its role in twilight vision and night blindness.
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## PHYSIOLOGY—PASS

<i>Paper-setters—</i>	{	DR. GIRINDRASEKHAR BOSE, D.Sc., M.B. ,, BIJALIBIHARI SARKAR, D.Sc.
<i>Examiner—</i>	{	MR. SAURINDRAMOHAN BANERJEE, M.Sc., M.B. ,, PHANINDRANATH BRAHMINACHARI, M.Sc., M.B. ,, BANBIHARI CHATTERJEE, M.Sc., M.B. ,, S. K. SEN, M.Sc., M.B., D.P.H.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any FIVE questions.*

1. Describe the cardiac cycle.
2. Describe the chemical control of respiration.
3. Describe the histological structure of the cardiac end of the stomach. Give a brief account of the action of gastric juice.
4. Discuss the role of *succus entericus* in digestion.
5. How is sugar, absorbed from the alimentary canal, utilized in the body?
6. Describe the mechanism of heat regulation in the body.
7. Write short notes on :—(a) cerebro-spinal fluid, (b) bile salts, (c) rigor mortis, (d) vitamin A, (e) phagocytosis.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Only FIVE questions are to be attempted.*

1. Give a brief account of the autonomic nervous system.
2. Give a brief account of the functions of the semi-circular canals.
3. Describe the functions of the iris.
4. Write a short essay on conditioned reflexes.
5. Discuss the principle of the 'all or none' law, citing examples.
6. How does parathyroid secretion influence metabolism?
7. Describe the microscopic structure of the kidney.

## GEOLOGY—HONOURS

<b>Paper-setters—</b> <b>(Pass &amp; Honours)</b>	{	MR. SARATIAL BISWAS, M.A.
		DR. CYRIL S. FOX, D.Sc.
		PROF. K. K. MATHUR, B.Sc.
		MR. D. N. WADIA, M.A., B.Sc., F.G.S., F.R.G.S.
<b>Examiners—</b>	{	MR. SARATIAL BISWAS, M.A.
		DR. MANMOHAN CHATTERJEE, M.Sc., Ph.D., A.R.C.S., D.I.C.
		MR. SATYACHARAN CHATTERJEE, M.Sc.
		DR. M. S. KRISHNAN, M.A., Ph.D., A.R.C.S.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer FIVE questions—at least TWO from each group.*

## GROUP A

1. What is your idea about the origin of the earth? Discuss its bearing on the question of the nature of the interior of the earth. 20
2. Explain how the geological record reveals (a) a lost interval, (b) a climatic change. 20
3. Write notes on:—dunes, block-mountain, diastrophism, and corrosion. 20
4. Write an essay on earthquakes, with special reference to the North Behar earthquake of 15th January 1934. 20

## GROUP B

5. Give an account of the role of igneous rocks in the formation of ore-deposits. 20
6. Describe the mode of occurrence, origin, and uses of mineral oil. 20
7. What do you know of—gossans, placers, stock-work, reh salt, and regur? 20
8. Give an account of the precious stones of India. 20

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer FIVE questions only—at least TWO from each group.*

## GROUP A

1. Describe the occurrence, chemical characters, physical characters and uses of—sillimanite, asbestos, tantalite, scheelite, and arsenopyrite. 20

2. What are twinning axis, twinning plane, and composition plane in a twinned crystal? Describe the characteristics of contact, penetration, and polysynthetic twins. 20
3. Describe clearly the causes of pleochroism, and the use of quartz wedge in determining minerals. 20
4. Give the classification of the felspars according to their chemical and physical properties. 20

#### GROUP B

5. Describe the following rock-types:—chamockite, plateau basalt, arkose, khondalite, epidiorite. 20
6. Describe the pneumatolytic alteration of granite. 20
7. Explain the causes and effects of differentiation in an igneous magma, citing examples. 20
8. Describe the igneous rocks of the Gondwana coal-fields of India. 20

#### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*Any FIVE questions out of these carry full marks.*

1. Discuss the palaeontological evidence bearing on the age of the base of the Lower Gondwana system.
2. What problems of evolutionary history of plant life are illustrated by the successive floras which appeared during the Gondwana era?
3. Explain carefully the meaning of the terms:—zoogeographical provinces, polymorphism, convergent types, cosmopolitan faunas, recapitulation, phylogeny, mutations.
4. Give an account of the pre-Siwalik mammals of the Indian region.
5. Describe, with sketches, the anatomy of a typical trilobite. Give the geological history and distribution of the principal genera of trilobites.
6. Write a note on the latest principles of classification of the Gastropoda. State briefly the geological history of some well-known Indian genera.
7. Give the exact stratigraphic horizon of the following stages and in each case mention the noteworthy fossils:—Chidern stage, Cardita beaumonti beds, Lameta series, Fatehjang stage, Nummulite shale, Umaria marine beds, Bagh beds, Kama clays, Otoceras zone.



## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only FIVE questions are to be answered, of which Question 8 must be one.*

1. Describe from a geological standpoint the main structural features of India of the present day, and describe how they have originated in the past. 20

2. Describe briefly the divisions of the Archaean succession in India. 20

3. Describe the Lower Palaeozoic rocks of the Northern Shan States. Compare the fauna of these rocks with that of the Lower Palaeozoic in Spiti. What light does this comparison throw on the distribution of land and sea in those times? 20

4. Compare the stratigraphical succession in the Salt range with the European scale, noting the changes that take place when the range is following from east to west. 20

5. Describe the Deccan trap formation of India. Give the evidence bearing on its age. Mention, without describing them, other similar formations in other parts of the world. 20

6. State briefly the geological history of the Himalaya during Tertiary times, and describe the various geological zones which are met with when crossing these mountains from north to south. 20

7. Give the distribution, the stratigraphical horizon, and the characteristic fossils, if any, of the following strata:—Lameta series, Denwa clays, Krol limestone, Unia stage, Subathu beds, Kioto limestone, Pinjor stage, Keuper and Bunter. 20

8. Describe, in detail, the geology of some district in India with which you are familiar. Give reasons for the ages which you assign to the rocks. 20

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 PASS

Examiners— { DR. P. K. GHOSH, D.Sc.  
MR. BHUPENDRANATH MAITRA, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer SIX questions only.*

1. Explain clearly the construction of a Nicol prism and show how a ray of light is polarized when passed through it.

2. Give the distinctive characters of—pyrite, chalcopyrite, bauxite, limonite, ilmenite, and wolfram. Indicate their uses.
  3. Give in tabular form the physical and the chemical characters of the Pyroxenes and the Amphiboles.
  4. Give a scheme of classification of the minerals, pointing out the principles on which it is based.
  5. How would you distinguish between—
    - (a) saturated and over-saturated rocks,
    - (b) gneiss and schist,
    - (c) conglomerate and agglomerate,
    - (d) pneumatolytic and hydrothermal changes?
  6. Give a summarized account of the Deccan trap under the following heads:—(a) modes of eruption and occurrence, (b) petrology, and (c) economics.
  7. Write notes on:—differentiation, hybrid rocks, and petrographical province.
  8. Describe the following rock types:—andesite, granodiorite, eclogite, anorthosite, monzonite, and trachyte. •
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## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*Any six questions out of these carry full marks.*

1. Write a note on earth-movements and the place of earthquakes, as geological agents, in earth dynamics.
  2. Give an account of the geological work of glaciers, and state the distinguishing characteristics of Himalayan glaciers as compared with the glaciers of the Alps.
  3. How can you distinguish ancient lake deposits among the geological formations of a country? Give examples of lacustrine formations in India.
  4. What are marine transgressions? Cite examples and give their characteristic features as distinguished from those of marine geosynclinal deposits.
  5. Classify the Permo-carboniferous rock-system of India as developed in different parts. Give the chief rock-types and noteworthy fossils.
  6. Give an account of the rocks, life, and distribution of the cretaceous system of the Peninsula. In a sketch-map illustrate the disposition of land and sea in the Indian region during this period.
  7. Assign the following fossil genera to their respective horizons:—*Schizaster*, *Schizodus*, *Redlichia*, *Assilina*, *Acanthoceras*, *Cyclolobus*, *Nilssonina*, *Conularia*, *Hipparion*, *Stylina*, *Camarophoria*. Give the systematic position of each of the genera.
  8. Write brief notes on:—(a) black cotton soil, (b) laterite, (c) formation of nitre in some soils.
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## ZOOLOGY—HONOURS

*Paper-setters*-- { DR. BAINI PRASAD, D.Sc.  
 PROF. KARAMNARAIAN BAHL, D.Sc.  
 „ GEORGE MATHAI, Sc.D.  
 „ HIMADRIKUMAR MOOKERJEE, D.Sc.

*Examiners*— { DR. BAINI PRASAD, D.Sc.  
 „ S. L. HORA, D.Sc.  
 PROF. HIMADRIKUMAR MOOKERJEE, D.Sc.  
 DR. HARENDRANATH RAY, M.Sc., Ph.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answers should be illustrated with suitable diagrams.*

*Only FOUR questions should be attempted.*

1. Give an account of the various modes of nutrition amongst the Protozoa. 25
2. Give an account of the effects of parasitism on the structure and life-history of *Platyhelminthes*. 25
3. Describe the external characters of a scorpion, and compare them with those of (a) a prawn, and (b) an insect. 25
4. Give an account of the respiratory organs in the *Mollusca*. 25
5. Give an account of the water-vascular system of the *Echinodermata*. 25
6. Give a reasoned classification of the *Cœlenterata*, with diagnostic characters and representative examples of each group. 25

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Only FOUR questions are to be attempted.*

1. Write a brief account of *Balanoglossus*, and discuss its systematic position. 25
2. Give a brief account of the various types of accessory respiratory organs in Teleostean fishes. 25
3. Give a comparative account of the hearts of fish, frog, bird, and mammal. 25
4. How would you distinguish between a poisonous and a non-poisonous snake? 25
5. Compare *Ratitae* with *Carinate*. 25
6. Give the distinguishing features of the *Carnivora*. What are the principal differences between aquatic and land carnivores? 25

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Not more than FOUR questions are to be attempted.*

1. Write a short essay on convergent evolution.
2. Give a brief account of the part played by the centrosome in cell phenomena.
3. Give a clear exposition of the principles of classification as applied to animals.
4. Explain the phenomenon of reversion, and discuss its significance.
5. Give a comparative account of the formation of the enteron and its derivatives in *Amphioxus*, frog, and fowl.
6. Briefly discuss the origin of *Gynandromorphism*.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Illustrate your answer with drawings as far as possible.*

Write an essay on any ONE of the following subjects:--

100

- (a) Origin of birds.
- (b) Recapitulation theory.
- (c) Mimicry and concealing colouration.

## ZOOLOGY—PASS

Paper-setter -	{ Dr. S. L. HORA, D.Sc. Mr. TARAKNATH PODDAR, M.Sc., M.B.
Examiners--	{ Mr. BIRENDRAKUMAR MITRA, M.Sc. ,, DURGADAS MUKHERJEE, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Only FIVE questions should be attempted.*

*Answers should be illustrated with suitable diagrams.*

1. Characterize the phylum *Protozoa* and enumerate its principal subdivisions, with short notes on and an example of each.

2. Describe the structure of a *Medusa*, and show how it differs from that of a *Polyp*.

3. Describe the life-history of a parasitic worm, and show how the organization of the worm is adapted to its mode of life.

4. Write what you know regarding the water-vascular system of a starfish.

5. Describe the appendages of either a crayfish or a *Palaeomon*, adding short notes on the functions of the various types of appendages.

6. Describe the nervous system of a *Gastropod mollusc*.

7. Write short notes on the following:—(a) *Peripatus*, (b) *Pecten*, (c) *Pluteus*, (d) *Proglottis*, (e) *Gemmule*.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Not more than FIVE questions are to be attempted.*

*Illustrate your answers with diagrams.*

1. Describe those structures in *Balanoglossus* which show its chordate affinities.

2. Describe the mode of oxygenation of blood in a Teleostean fish, and show how it differs from that of the frog.

3. Give an account of the circulation of blood through the heart of crocodile. Write a short note on the geographical distribution of the *Crocodylia*.

4. Characterize the *Ratitae*, and give notes on the habits of the birds included in this division.

5. What are *Ungulata*? Give an outline classification of the order with examples.

6. Describe the development of the frog up to the stage of formation of the germinal layers. Enumerate the principal structures derived from each germinal layer.

7. Write short notes on any FIVE of the following:— (a) mutation, (b) inheritance of acquired characters, (c) mendelism, (d) variation, (e) mimicry, (f) adaptation, (g) nucleus, (h) geological distribution of animals.

## EXPERIMENTAL PSYCHOLOGY—HONOURS

<i>per-setters—</i>	{	MR. MANMATHANATH BANERJEE, M.Sc. „ HARIDAS BHATTACHARYA, M.A. „ BIMALCHANDRA GHOSH, M.A., M.B., B.C. PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.
<i>Examiners—</i>	{	DR. GIRINDRASEKHAR BOSE, M.B., D.Sc. MR. BIMALCHANDRA GHOSH, M.A., M.B., B.C. PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E. MR. HARIPADA MAITI, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer FIVE questions only, but at least TWO questions must be chosen from each group.*

## GROUP A

1. Expand the following proposition with suitable illustrations:—*‘Perception is at once a combining response and an isolating response.’*

Discuss also whether and, if so, how far the combination and isolation are conscious processes.

2. Elaborate and illustrate the following statement:—*‘In these ways, by strengthening, fixing and combining movements, and by new attachments and detachments between stimulus and response, the instinctive motor activity of the baby passes over into the skilled and habitual movement of the adult.’*

3. Describe and illustrate the different forms of attention. How are these forms inter-related?

4. Distinguish a percept, a concept, and an image with appropriate illustrations.

Can an image be called a less intense percept and a concept a coalescence of images in the manner of composite photography? Give reasons for your answer.

5. How is belief distinguished from knowledge and imagination? Illustrate your answer.

## GROUP B

6. Distinguish a sense-feeling, an emotion, and a sentiment. Illustrate your answer.

What difference would it make if the James-Lange theory be true?

7. What light does the modification of instinct by experience throw on the relation between instinct and intelligence? Critically discuss the question.

8. What is the exact point at issue between structuralism and functionalism in Psychology? Appraise the value of each school.

9. Outline the contributions to Psychology of any two of the following writers:—Wundt, Freud, McDougall, Watson.

10. *Either*, Discuss the limits of self-control.

*Or*, Distinguish, with appropriate illustrations, illusion, hallucination, make-believe, and dream.

---

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer only FOUR questions.*

1. Give an account of the receptors concerned with the perception of tactual space.
  2. Discuss the psycho-physiology of fatigue.
  3. Emotions have been described as 'marginal to consciousness, a matter of mental background'. Expound this in the case of higher animals.
  4. Explain what is meant by antagonistic reflexes. Give an example, illustrating your answer clearly.
  5. Give a brief account of encephalic centres.
  6. Write an essay on 'sense-experience of animals'.
- 

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any SIX questions.*

1. Write an essay on Analysis of Perception.
  2. What are the characters of a musical sound and their physical bases?
  3. Discuss the theory of specific nerve energy.
  4. What is 'suggestion'? What factors determine 'suggestibility'? Describe experiments to illustrate the phenomena of 'auto-suggestion'.
  5. Give a brief account of the methods of impression and of expression employed in the study of emotions.
  6. Indicate and explain the phases of a learning curve.
  7. What do you understand by 'intelligence'? Give a short account of graded mental scales usually employed.
  8. Write an account of temperament and character tests.
-

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The value of Question 1 is double that of any other.*

*Attempt Question 1 and any FOUR of the rest.*

1. Carefully state all the precautions you should take regarding the adjustment of apparatus and the method of presentation of the stimuli, in conducting any FOUR of the following experiments:—

- (a) Colour sensitivity of the retina by the campimeter.
- (b) Study of respiration by the pneumograph.
- (c) Reaction time by the Vernier chronoscope.
- (d) Neutralization of colour in the colour mixer.
- (e) Capacity for memorizing by non-sense syllables.
- (f) Effect of psychical stimuli in the estimation of physical fatigue.

2. What do you understand by free association and word-association experiments? State carefully how they are applied and the purpose they serve in Psychology.

3. Discuss the criteria by which you can test the reliability of the result of a series of experiments.

Reproduce any two formulae for measuring correlation.

4. Enumerate all the sources of error in a psychological experiment, and state the measures you would adopt to obviate them.

5. Present lucidly the outlines of various psychical methods, noting their applicability in different types of measurement.

6. What are the commonest devices for securing the attention (a) of a small child, (b) of a bored person, and (c) of a political gathering? Upon what innate or learned factors does each device depend?

7. Write a short essay on 'the application of Psychology in the furtherance of human welfare'.

## EXPERIMENTAL PSYCHOLOGY—PASS

*Paper-setters—* { DR. GIRINDRASEKHAR BOSE, D.Sc., M.B.  
                                  ,, N. N. SENGUPTA, M.A., Ph.D.

*Examiners—* { MR. HARIDAS BHATTACHARYYA, M.A.  
                                  DR. SCHRITCHANDRA MITRA, M.A., Ph.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Only FIVE questions to be answered.*

1. Discuss how far the colour-phenomena may be explained in terms of the Young-Helmholtz theory of colour vision.



2. What are the sources from which you may obtain data for Psychology? Discuss their respective limitation.
  3. State the principal types of geometrical optical illusions. Discuss at least two of the theories of optical illusion.
  4. Discuss in what sense 'all the laws of association may be reduced to that of contiguity'.
  5. Write a brief estimate of the James-Lange theory of emotion in the light of recent studies
  6. Discuss how far voluntary action can be explained as a complete ideo-motor action.
  7. Distinguish between (a) memory and recognition, and (b) instinctive and reflex action.
  8. Write notes on the following :—range of attention, span of memory, terminal inhibition, adaptation.
- 

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All questions carry equal marks.*

*Answer any SIX questions.*

1. Describe the colour pyramid.
  2. What are kinaesthetic sensations? Name the end organs of kinaesthetic sensations. Briefly describe the role of kinaesthesia in normal life.
  3. Briefly discuss the relative merits of the different theories that have been put forward to explain local sign.
  4. Can emotions be experimentally studied? If so, describe the general principles of such an experiment.
  5. What is memory? Can it be measured? If so, how?
  6. Describe briefly the factors involved in the perception of depth.
  7. What are muscular and sensory reaction times? Why do they differ from each other?
  8. Discuss the effects of habit, expectation, and fatigue on psychological experiments.
-

## ANTHROPOLOGY

*Paper-setters—* { RAO BAHADUR L. K. ANANTAKRISHNA IYER, B.A., L.T.  
 DR. BIRAJASANKAR GUHA, M.A., PH.D.  
 RAI SARATCHANDRA RAY, BAHADUR, M.A., B.L., M.L.C.  
 MR. ANATHNATH CHATTERJEE, M.B., B.S.

*Examiners—* { RAO BAHADUR L. K. ANANTAKRISHNA IYER, B.A., L.T.  
 DR. PANCHANAN MITRA, M.A., PH.D.  
 RAI SARATCHANDRA RAY, BAHADUR, M.A., B.L., M.L.C.

## HONOURS

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

1. Write a short dissertation on any ONE of the following:—  
 (a) The probable character of the proto-human stock.  
 (b) Man's relationship to the Anthropoid Apes.
  2. Describe briefly the physical characters of *Eoanthropus Dawsoni*.
  3. Either, Classify the races of man according to the character of their hair.  
 Or, Discuss how far environment modifies skin colour.
  4. Describe the ethnic elements which enter into the formation of any ONE of the following peoples:—(a) Bengalee, (b) Italians, (c) Persians, (d) Germans.
  5. Write short ethnological notes on:—(a) Todas, (b) Oraons, (c) Kukis, (d) Kadiars.
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## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*N.B.—Not more than FOUR questions are to be attempted.*

1. Discuss the various burial customs, as illustrative of the primitive theory of the soul.
  2. Discuss critically the following: 'Civilization is the product of patriarchal societies and masculine intellect.'
  3. Discuss and criticize the various theories of the diffusion and evolution of culture.
  4. Write what you know about the growth of classic myths.
  5. Write what you know about primitive habitations of man.
  6. Give an account of the Sema Nagas—their habitat and affinities—origin and migration—appearance, dress, weapons, and character.
  7. Write what you know about the fear of the dead in primitive religion.
-

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer any FIVE questions.*

1. Describe the *norma lateralis* of the skull from La Chapelle-aux-Saints. In what features does this skull differ from those found at Krapina?
2. Briefly assess the affinities of the skeletal remains found at Raymond (Chancelade).
3. Write a short dissertation on any ONE of the following :—  
 (a) The Neanderthal phase of man.  
 (b) Upper palaeolithic art.
4. Analyse the mixed population of the East Indian Archipelago.
5. Give a brief account of the racial history of the Andeans.
6. Write short notes on any two of the following :—(a) the Nala cranium, (b) the Aditunnallur crania, (c) Mohe-jo-daro skeletons, (d) Wadjaak skulls.
7. Give the leading features of any two of the following :—(a) La Tene culture, (b) early Minoan culture, (c) early Mesopotamian civilizations ; and write short notes on the physical features of the people connected with them.
8. State briefly what you know about the physical features, dietetic habits, and psychological characters of the Hottentot and the Semang.

## FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions carry equal marks.*

*Answer any THREE of them.*

1. Write an essay on the 'Genesis of Culture'.
2. Write an essay on the 'Various forms of social organization and the mode of their evolution.'
3. Write an essay on 'Caste—its origin and development, and its effects on society and the individual'.
4. Write an essay on 'Primitive law and the growth of moral ideas'.
5. Write an essay on the 'Relative influence of the three factors—viz. the individual, the race, and the environment—on culture and culture-types. (Conclusions should be supported by specific illustrations from different parts of the world.)

## PASS

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*All the questions are of equal value.*

*Answer ANY FOUR questions.*

1. Write a dissertation on the value of skin colour as a racial criterion.

*Or,*

Write what you know about the methodology and aims of Anthropometry.

2. Briefly describe the physical characters of *Homo Neanderthalensis*.

*Or,*

Write a short note on 'Palaeoliths'.

3. Write what you know about the habitat, physical appearance, and methods of procuring food of *any two* of the following tribes:—

(a) Veddas, (b) Mundas, (c) Kaders, and (d) Kukis.

4. Classify the peoples of India according to Cephalic Index.

*Or,*

Comment on Risley's classification of the peoples of India.

5. What are the distinguishing traits of the three great races of Europe? Draw a map showing their present-day distribution.

*Or,*

Give a brief account of the rise and spread of the Nords in Europe.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Write an essay on 'Mana and Tabu', with illustrations from the customs of Indian primitive tribes and Hindu castes. 50

2. *Either*, Write an essay on 'Culture Contact'. 30

*Or*, Write an essay on 'The Origin of Caste'.

3. *Either*, Give an account of the evolution of musical instruments. 20

*Or*, Give an account of the evolution of weapons of war and chase.

## B. Com. Examination, 1935

### BENGALI COMPOSITION

**Paper-setter**—MR. SYAMAPRASAD MOOKERJEE, M.A., B.L., BARRISTER-AT-LAW,  
M.L.C.

**Examiner**—RAI BAHADUR TARAKNATH SADIHU, B.L.

*The figures in the margin indicate full marks.*

1. Give the Bengali equivalents for *any five* of the following expressions :— 10

- (a) Managing partner, (b) Market reports, (c) Credit note, (d) Current account in a bank, (e) Discounting of a bill of exchange, (f) Customs duties, (g) Commercial treaty.

2. Translate into Bengali *any two* of the following :—

(a) In all business, correspondence naturally plays a very important part. In fact, if a person starts a new business the first step which he will have to take is to write letters, informing all who are likely to deal with him of the fact that he has started a new business, and throughout his career as a businessman he will have to write letters at every step. Thus it is important for a young aspirant to business success to master this branch in detail. He must study the English language with great care. 20

(b) With the possible exception of shipping, every industry needs land for its factory and offices. More than that, there is only a certain amount of land to go round, and an industry cannot put up with any land. A factory could not be successfully established in the middle of the desert of Sahara, or even five miles from the nearest railway. Unlike raw material and products of industry which are interchangeable, land is not. One Ford car is as good as the next, but one field or factory site may be far worse than its neighbour. It is these facts which help to determine what is to be paid for the use of land, whether for a farm, a dwelling house, or for a factory. 20

(c) Of late years the worker's position has been greatly strengthened. One reason is the growth of trade unionism. Instead of an employer being able to deal with each of his workers singly, with the underlying threat that if one does not take his terms he can easily find another, the workers have banded themselves into trade unions, embracing firstly the workers in a particular district, and to-day all the workers in a single trade or a single group of trades. This means that the trade union can employ as negotiators on behalf of their members men who have just as much knowledge and experience as the employers themselves. 20

3. Write an essay in Bengali on *any one* of the following subjects :— 30

- (a) Agricultural indebtedness in India.  
(b) India's foreign trade in recent years.  
(c) Protective tariffs.  
(d) The development of railways in India.

4. Translate the following into English :— 20

कृषिमाय चा विक्रय सम्पर्के “भारतीय चा समेशन” निम्नोक्त विवृति प्रचार करियाछेन :—

चायेर बाजारे ये दुर्दशा उपस्थित हईयाछे, जगतते चायेर चाहिदा वृद्धि करिते पारिले ताहा मोचन हईते पारे—एई उद्देशे “आन्तर्राज्यिक चा कमिटी” कृषिमाय चा विक्रयेर सुविधार जन्तु कृषिमाके धारे चा क्रयेर सुयोग दानेर एक परिकल्पना श्रित करियाछेन। पूर्वे कृषिमा वंसरे १८ कोटी पाउण्ड काल चा क्रय करित। आजकाल कृषिमा ४० लक्ष पाउण्डेर बेसी चा क्रय करे ना। किन्तु स्पष्ट प्रमाण पाओया गियाछे—ये वर्तमाने कृषिमा नगदे ओ धारे ये परिमाण चा क्रय करे, कृषिमाय अधिवासीरा ताहा अपेक्षा अनेक बेसी चा क्रय करिते ईच्छुक।

## HINDI COMPOSITION

*Paper-setter*—MR. LALTAPRASAD SIKUL, M.A.

*Examiner*—RAI BAHADUR GOBINLAL BANERJEE, B.A., KAVIRATNA.

*The figures in the margin indicate full marks.*

1. Please translate into English one of the two passages given below :— 20

(a) जापान इस समय युद्ध करने पर तुला हुआ है। वह इतना अधिक शक्तिशाली हो गया है कि वह अब अपने को संभाल नहीं सकता। व्यापार में उसने ग्रेट-ब्रिटन और संयुक्त राज्य जैसे उद्यमशील राष्ट्रों को परास्त कर दिया है और अब स्वयं उन्ही देशों में वह सफलता के साथ व्यापार कर रहा है। अभी हाल में अवीसीनिया में बसने और वहां कारबार करने की उसे अनुमति मिल गई है और जापानी वहां धीरे धीरे आबाद भी होने लग गए हैं। ऐसी दशा में अपनी इस व्यापार-सम्बन्धी विजय के काल में जापान किसी ऐसे युद्ध में नहीं फँसेगा जिससे उसके व्यापार में हानि होगी। परन्तु उस या चीन से भिड़ जाने में वह हिचकीगा भी नहीं। चीन की तो वह एक बड़ा भारी धक्का दे ही चुका है, अब उस की बारी है।

(b) जापानियों की देखा-देखी लंकाशायरवालों ने भी अपना एक प्रतिनिधि-मण्डल भारत भेजा और उन्होंने ने भी अपने वस्त्र-व्यवसाय के सम्बन्ध में समझौते की बातचीत शुरू की। भारत के साथ उनका १६ अक्टूबर की समझौता भी हो गया। इस समझौते के

अनुसार भारतीय सूती कपड़े के व्यवसाय की ब्रिटन के सूत और सूती कपड़े के आयात के विरुद्ध व्यापारिक संरक्षण प्राप्त होगा। और ग्रेट-ब्रिटन को अपेक्षा बंध देशों के मुकाबले में उसे और भी अधिक संरक्षण प्राप्त होगा। साथ ही ब्रिटन से आनेवाले कपड़े पर अभी तीन वर्ष तक कोई विशेष कर न लगेगा। इसके बदले में भारतीय सूतीमाल ब्रिटन में खपाने का भरसक प्रयत्न किया जायगा। यह समझौता बम्बई के मिलवालों तथा लंकाशायर के उन्नत प्रतिनिधियों में हुआ है।

2. Please explain the underlined expressions in the following :— 15

संसार में इस समय जो महान आर्थिक संकट फैला हुआ है और जो व्यापारिक शिथिलता दृष्टिगोचर हो रही है, उसका एक कारण अन्तर-राष्ट्रीय-सूत्र की समस्या भी है। कुछ दिनों से लंदन में जो विश्व आर्थिक सम्मेलन हो रहा है उसके कार्य-क्रम में, अमेरिका के कहने से, यद्यपि पन्त्यच रूप से इस प्रश्न की कोई स्थान नहीं दिया गया है तथापि इसकी आवश्यकता से सब परिचित हैं।

3. (a) Please correct the following sentences :— 8

विश्वभारती का स्थापना १८२१ इस्वी में हुआ था। वह समय संसार का देशों के बिहानी बुलाई गया थी। और सब का सहानभूत विश्वभारती का साथ में था। तुमकी नौ शान्ति-निकेतन कबो देखना मांगी।

(b) How do you decide the genders of inanimate objects? Illustrate your rules by examples. 7

4. Please translate into simple Hindi any two of the following passages :— 20

(a) In large cities the population is dense and people have to live in small unhealthy houses, made still more undesirable by being situated in dirty streets and filthy lanes. People in the large cities generally breathe in disease and sickness everywhere. The dust of the roads chokes the air and fills the nostrils and lungs of the breather. On account of the scarcity of fresh air one feels dull and heavy.

(b) A man cannot always choose his own company. The convict in a penal settlement, however anxious to reform, cannot escape from evil companions; and it ought not to be harshly assumed that there is no good in such a person. There are cases where a good man associates with the wicked in the hope of turning them from the error of their way.

(c) In this world rain is necessary to moisten and soften the soil to fit it for the purposes of agriculture. Without agriculture we would be unable to obtain any food. Without vegetation the animals would be unable to live. Trees and plants would dry up for want of moisture; and the ground itself would become parched and cracked.

5. Please draft a letter in Hindi, asking for the 'quotations' of some business commodity from the wholesale merchants. 10

6. Please write an essay in Hindi of not more than 50 lines on one of the following subjects :— 20

(a) The necessity of 'commercial education'.

(b) Honesty is the best policy in business.

(c) 'A broker tells his own story.'

## ASSAMESE COMPOSITION

*Paper-setter & Examiner—MR. SURYAKUMAR BHUIYAN, M.A.*

*The figures in the margin indicate full marks.*

1. Translate any two of the following passages into Assamese.—

(a) Weaving of cotton is practised among the Assamese people in all the houses, and this is done exclusively by the women-folk. Every house is provided with a handloom, and other implements of weaving and spinning. Weaving is counted upon as an important education on the part of a girl and it enhances the value of a bride. The village people always prefer rough and coarse home-spun and home-woven cloths to any delicate foreign textures. But they are being replaced and supplemented by machine-made cloths in many houses. 15

(b) The capital of Bengal is Calcutta, the largest city in India, on the left bank of the Hooghly. It is a great port with fine docks, and serves not only Bengal, but also Bihar and Orissa and parts of the United Provinces. The chief exports are jute, tea, coal, rice, wheat, and oilseeds; and the chief imports are cotton goods, sugar, salt, spices, etc. Calcutta is also an industrial city, and contains a number of rice mills, oil mills, flour mills, jute presses, printing presses, tanneries, and engineering workshops. 15

(c) The main occupation of the people of Assam is agriculture in the fertile river valleys, and the most important crop is rice. Jute and tea are also extensively grown for export; oilseeds, sugarcane, cotton, tobacco, and oranges are other products. Silk rearing and weaving, cotton weaving, basket work, cane weaving, mats, etc. are important indigenous industries. The preparation of tea is also an important industry. The important minerals are coal, petroleum, and limestone. 15

2. Translate any two of the following passages into English:—

(a) আসামৰ পুৰণি নাম কামৰূপ। মহাভাৰতত কামৰূপ ৰাজ্যৰ উল্লেখ আছে। ব্ৰহ্মপুত্ৰ নৈ ইয়াৰ মাজেদি বৈ গৈছে। আসামৰ চাৰিও দাতিয়ে পৰ্ব্বতশ্ৰেণী আছে। ইয়াৰ মাটি বৰ সাকৰ।। প্ৰায় সকলো বিধ শস্যই ইয়াত জনে। কিন্তু খেতিয়কবিলাক ইমান পৰিশ্ৰমী নহয়। কানিয়ে এই দেশৰ মানুহক বৰ অপকাৰ কৰিছে। আসামৰ এৰি মুগা কপোৰ দামী বস্তু। চাহ খেতিৰ বাবেও আসাম বিখ্যাত। ইয়াত তেলৰ পুং আৰু কয়লাৰ খনিও আছে। 10

(b) ৰামপুৰ নামে এখন গাঁও আছে। তাৰ সবহ ভাগ মানুহেই ধানৰ খেতি কৰি খায়। তোমালোকে জানা যে ধানৰ খেতি কৰিবলৈ বৰষুণ বৰ আৱশ্যক। কিন্তু ৰামপুৰৰ মানুহবোৰৰ এটা সুবিধা আছে;—পথাৰৰ ওচৰত এটা ডাঙৰ পুখুৰী আছে। সেই পুখুৰীত পানী ভৰি থাকিলে আৰু বৰষুণৰ



পানীৰ আৱশ্যক নহয়, সেই পানীৰেই খেতি কৰিব পাৰি। নৰ্দ্ধমা কাটি  
পুখুৰীৰ পানী পথাৰত বিলাবলৈ একো টান নহয়। 10

(c) যাৰ গা দুৰ্ৰল আৰু কগীয়া তাৰ একো সুখ নাই। এতেকে শৰীৰ  
যেন সবল হয় এইটো সকলোৰে চেষ্টা কৰা উচিত। শৰীৰ বলিষ্ঠ কৰিবৰ উপায়  
শাৰীৰিক পৰিশ্ৰম। নিতৌ উত্তমৰূপে অঙ্গবিলাক পৰিচালনা কৰিব লাগে।  
হাত, ভৰি, আৰু গা চলাই থাকিব লাগে। যি অঙ্গকে চলোৱা নাযায় সিয়েই  
দুৰ্ৰল হয়। নাও বোৱা, কোৰ মৰা, খোজ কঢ়া ইত্যাদি ভাল শাৰীৰিক  
পৰিশ্ৰম। গুণবন্ত মাতৃহোৱা কগীয়া হলে সংসাৰত একো কামত নাহে। 10

3. Write a letter in Assamese to a business client of yours, asking him  
if he can popularize the umbrellas manufactured by you. 10

4. Write an essay in Assamese on *any one* of the following sub-  
jects:— 40

- (1) 'A Degree in Commerce is one thing, and success in business is another.'
- (2) The history of *any* famous Indian firm.
- (3) The raw materials produced in India.
- (4) Aviation and commerce.
- (5) Railway advertisements.
- (6) Why Marwaris are successful businessmen?
- (7) 'In business the two things are equally important, capital and character.'
- (8) Will India manufacture motor vehicles?
- (9) The cottage industries of Bengal.
- (10) The autobiography of a ten-rupee currency note.

## URDU COMPOSITION.

*Paper-setter*—SHAMS-UL-ULAMA MD. HIDAYET HUSAIN, KHAN BAHADUR,  
F.R.S.B.

*Examiner*—MR. A. F. M. ABDUL KADIR, M.A.

*The figures in the margin indicate full marks.*

1. Translate into Urdu:—

35

While the contest between Husain Ali Khan and Kokaltash Khan was proceeding, Chahela Ram made a fierce charge on Jani Khan. He was backed up by Khan Zaman (Ali Asghar) and Muhammad Khan Bangash and both sides made play with their swords. Many a head was severed, many a saddle emptied. It was late in the afternoon and the booming of Jahandar Shah's big guns could now be heard. Farrukh-Siyar's men seemed to lose heart; many left the field and took shelter in neighbouring villages.

When Zulfiqar Khan noticed that Kokaltash Khan had begun to gain the upper hand, he directed Mukhtar Khan to lead a strong reinforcement to their right, to the aid of Jani Khan, and gave orders in person

to the artillery to direct their fire against Abdullah Khan. The latter held his ground boldly against this artillery fire, his position being on a mound slightly raised above the plain. But some of his supporters, particularly the new levies, showed signs of giving way. In spite of this Abdullah Khan, surrounded by his Barha Sayyids, then not numbering more than two or three hundred, remained on the mound where he had taken up his place. Availing himself of his opportunity, Churaman Jat, a practised plunderer, fell on the rear of Jahandar Shah and captured many elephants and camels together with the baggage loaded upon them; and one of his officers, Girdhar Singh, tried to drive off the oxen, which were used to drag the heavy guns, but was slain by Raji Muhammad Khan in the attempt.

2. Translate into English :—

30

A

ایک لڑکا اپنے باپ کے پاس بیٹھا ہوا تھا - دیکھا - کہ چیونٹیاں قطار در قطار چلی جاتی ہیں - ہر ایک کے منہ میں دانہ ہے - بیٹے نے پوچھا - ابا جان - ہمارے مرغے تو جہاں دانہ ملتا ہے چگنے لگتے ہیں - چیونٹیاں ایسا کیوں نہیں کرتیں یہ دانہ کہاں لے جا رہی ہیں - باپ نے کہا - بیٹا ؟ چیونٹیاں بڑی دانہ اور در اندیش ہیں - یہ سمجھتی ہیں کہ سردیوں میں باہر نکلا اور خوراک کا ملنا مشکل ہے - جس قدر ہوسکے - گرمیوں میں جمع کر لیں - تاکہ موسم سرما میں بھوک سے ہلاک نہ ہوں - ان کو گرمی کے موسم اگر دو دانے ملتے ہیں - تو ایک تو کھا لیتی ہیں - اور ایک لے جا کر اپنے گھر میں رکھ آتی ہیں - اور اسی طرح محنت اور کفایت شعاری سے خوراک کا کافی ذخیرہ جمع کر لیتی اور موسم سرما بڑے مزے سے گھر بیٹھ کر گزارتی ہیں - بیٹا ؟ تم کو اس نفع جانور سے سبق سیکھنا چاہئے - تم ہر روز مجھ سے ایک آنہ لے جاتے اور خرچ کرتے ہو - اگر تم دو پیسے بھی ہر روز بچاؤ - تو سال میں ۶۰ روپیہ تمہارے پاس جمع ہو جائیں \*

B

شام کے بادشاہ کو معلوم ہوا کہ اس کا وزیر بڑا ظالم ہے - رعایا کو لوٹ کر اُس نے بڑی دولت جمع کر لی ہے - بادشاہ نے اُس کو قید کر دیا - اور

اس کی جائداد ضبط کر لی - اس کے ناز و نعمت میں پلے ہڑے بیٹے بالکل۔  
 جاہل تھے - نہ علم تھا نہ ہنر - بھوکے مرنے لگے - شہر میں بھیک مانگنا  
 بدنامی کے خیال سے گوارا نہ کیا - دیہات کو نکل گئے - اور تکتہ گداہی سے  
 بسر اوقات کرنے لگے \*

3. Expand the idea contained in :—

10

پہچانتے ہیں خوب جو ہیں معنی آشنا  
 دنیا ہے نقش آب سپر برین حباب

4. Write an essay on one of the following subjects :—

25

- (a) Knowledge versus Wealth.  
 (b) Agriculture in Bengal.  
 (c) Advantages of Banking system.

## TAMIL COMPOSITION

Paper-setter—RAO BAHADUR L. K. ANANTAKRISHNA IYER, B.A., L.T.

Examiner—REV. T. SITHIER, M.A., B.D.

*Candidates are required to give their answers in their own words as far as practicable.*

*The questions are of equal value.*

1. Translate into Tamil any two of the following passages :—

(a) Now it happened, just when Sparta and Athens had finished their disastrous war for the leadership of Hellas, that Macedonia was ruled by a very clever man by the name of Philip. He admired the Greek spirit in letters and art, but he despised the Greek lack of self-control in political affairs. It irritated him to see a perfectly good people waste the men and money upon fruitless quarrels. So he settled the difficulty by making himself the master of Greece, and then he asked his new subjects to join him on a voyage to Persia in return for the visit which Xerxes had paid the Greeks one hundred and fifty years before.

(b) The Greeks had learned the art of trading from the Aegians who had been the pupils of the Phœnicians. They had founded colonies after the Phœnician pattern. They had even improved upon the Phœnician methods by a more general use of money in dealing with foreign customers. In the sixth century before our era they had established themselves along the coast of Asia Minor, and they were taking away trade from the Phœnicians at a fast rate. The Phœnicians did not like this, but they were not strong enough to risk a war with their Greek competitors. They sat and waited, nor did they wait in vain.

(c) In the beginning all the Greeks had been equally rich and poor. Every man had owned a certain number of cows and sheep. His mud hut had been his castle. He had been free to come and go as he wished. When-

ever it was necessary to discuss matters of public importance, all the citizens had gathered in the market place. One of the older men of the village was elected chairman, and it was his duty to see that everybody had a chance to express his views. But gradually the village had grown into a city.

2. Write an essay in Tamil on one of the following :—

(a) Overproduction and its results.

(b) Influence of tariff on foreign articles.

3. Write a letter in Tamil to your father about the advantages of 'business' as your choice of profession.

## FRENCH COMPOSITION

Paper-setter—DR. PRABODHCHANDRA BAGCHI, M.A., D.Lit.

Examiner—MR. N. N. CHANDRA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any two of the following into English :—

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(a) Dix jeunes filles, nos petites-filles, sur deux rangées, nous attendent à la porte. Elles portent les plateaux avec la pâte de santal dont légèrement elles nous enduisent le front. Puis deux autres nous passent les guirlandes de fleurs, c'est ensuite l'encens, les pétales de fleurs, etc., elles nous précèdent dans la salle comble où nous sommes attendus. Un bel *alpona* décore l'estrade où nous nous asseyons, à côté de Tagore, les fillettes en demi-cercle, et je reconnais peu à peu dans cette foule les figures amies que depuis dix mois j'ai toujours eu si grand plaisir à reconstruire. Tagore dit, comme il sait le dire, toute sa gratitude au savant, venu le premier à l'Université Internationale dont il a accepté d'être un des membres fondateurs.

(b) Il y a quelque chose d'étrangement mélancolique, attristant, dans ces manifestations qui, de gare en gare, massent des foules pour voir passer un homme, si grand soit-il, lui demandant une direction, ce pays de 320 millions d'habitants est-il si pauvre en chefs? Mais Tagore ne peut parler qu'à une élite, cet homme à la vie matérielle si réduite, par sa tradition, sa culture ses goûts, est un grand aristocrate, ses larges vues, son rayonnement, sa vaste intelligence le placent trop loin de l'ignorance et des préjugés religieux et sociaux de son peuple.

(c) —Madame Grandet, as-tu fini? dit le vieux tonnelier.

—Mon ami, je prie pour toi.

—Très bien! bonsoir. Demain matin, nous causerons.

Le pauvre femme s'endormit comme l'écolier qui n'ayant pas appris ses leçons, craint de trouver à son réveil le visage irrité du maître. Au moment où par frayeur elle se roulait dans les draps pour ne rien entendre, Eugénie se coula près d'elle, en chemise, pieds nus, et vint la baiser au front.

—Oh, bonne mère, dit-elle, demain, je lui dirai que c'est moi.

—Non, il t'enverrait à Noyers. Laisse-moi faire, il ne me mangera pas.

2. Write grammatical notes on the words *italicized* in passages (b) and (c) of Question 1. 10
3. Conjugate the verb *aller* for different persons and numbers in the Present Indicative. 10
4. Write a letter in French to your friend, stating the advantages which your B.Com. studies promise. 15
5. Translate the following into French :— 25

The Portuguese came to India towards the end of the fifteenth century, soon became masters of the Indian Ocean, and in 1510 took Goa. In 1534 they seized Bassein and forced Bahadurshah, Sultan of Gujarat, to hand over to the King of Portugal, for ever, the city of Bassein, its territories, islands, and seas. The Bombay islands thus passed from Muhammadans to Christians. The Portuguese divided the islands into fiefs which were granted as rewards to deserving persons who in turn were bound to give military assistance to the King in times of necessity. In the meantime the English merchants who were settled in Surat were already coveting Bombay and as early as 1632 their Council had urged the Directors of East India Company to purchase it.

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## GERMAN COMPOSITION

*Paper-setter*—DR. STELLA KRAMRISCH, PH.D.

*Examiner*—DR. K. L. GANGULI, M.Sc., DR. ING. (MUNICH).

*The questions are of equal value.*

1. Translate into English :—

Vor dem grossen Bild Eycks hat Goethe lange schweigend gesessen, den ganzen Tag nichts darüber geredet, aber nachmittags beim Spaziergang gesagt : Da habe ich nun in meinem Leben viele Verse gemacht, darunter sind ein paar gute und viele mittelmässige. Da macht der Eyck ein solches Bild, das mehr wert ist als alles, was ich gemacht habe.

2. Translate into German :—

Money is only important for what it will procure. Thus a change in the monetary unit, which is uniform in its operation and affects all transactions equally, has no consequences.

Now this old international world is gone. Its pathway are all blocked up with foreign tariffs, prohibitions, coastal laws, and the exclusion of immigration.

3. State :—

Imperative, Future, and Present Participle of the German verbs for : give, take, hurry, eat, follow.

4. Write a short essay in German on any subject of commercial interest.
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## MALAYALAM COMPOSITION

*Paper-setter*—MR. K. ZACHARIAH, M.A.*Examiner*—REV. C. E. ABRAHAM, M.A., B.D.*The figures in the margin indicate full marks.*

1. Translate the following passage into English :—

25

കഴിഞ്ഞ മൂന്നു നാലു വത്സരങ്ങളായി ലോകത്തെ ആകമാനം ബാധിച്ചിരിക്കുന്ന സാമ്പത്തികാപകർഷ്ഠത്തിനു പ്രതിവിധി നേടുന്നതിനായി ധനശാസ്ത്രവിശാരദന്മാർ തപ്തമസ്തിഷ്ഠരായി ആലോചിച്ചിട്ടും യാതൊരു ഫലവും ഉണ്ടാകുന്നില്ല. ഒരു രാജ്യത്ത് ആവശ്യത്തിലധികമായി ധാരാളം ധാന്യമുണ്ടായിട്ട് അതു നശിപ്പിക്കുമ്പോൾ മറെറൊരു രാജ്യത്ത് അഷ്ടിക്കു വകയില്ലാതെ പട്ടിണി കൊണ്ട് മനുഷ്യർ നട്ടംതിരിയിയുന്നു. എത്രതും കൊണ്ട് ഒരു രാജ്യാതിർത്തിയുടെ ഇരു വശങ്ങളിൽ ഇങ്ങിനെയുള്ള അവസ്ഥാന്തരങ്ങൾ ഉണ്ടായിക്കൊണ്ടിരിക്കുന്നു എന്നുള്ള പ്രശ്നത്തിനു മനുഷ്യരുടെ സഹകരണരാഹിത്യം ഇതും ഇതിൽ ഭയങ്കരവുമായ കാര്യങ്ങൾ വരുത്തിക്കൂട്ടം എന്നേ സമാധാനം പരയുവാൻ തരമുള്ളൂ. ലോകം മുഴുവൻ ഒരു ഭരണമണ്ഡലമായി തീർന്നെങ്കിൽ മാത്രമേ ഈവിധ വിഷമപ്രശ്നങ്ങൾക്കു പരിഹാരമുണ്ടാകയുള്ളൂ.

2. Translate one of the following passages into Malayalam :—

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(a) The villagers are simple to a fault. This simplicity manifests itself in their food, their dress, and their ways of living. They do not waste money on mere frivolities or trumpery. But they spend extravagantly on marriage and other social functions. In this matter, they are but the slaves of custom and convention. The women hanker after ornaments. Another trait in the character of the villager is his confirmed conservatism. He views with alarm and suspicion all attempts at change. When I suggested the desirability of starting a bank which would lend money at low rates of interest and thus free the poor from the grip of the money-lender, the well-to-do classes were sceptical about the success of such an institution on the ground that they could not appreciate the principle of joint responsibility and liability.

(b) The study of economic history has led to the conclusion that the development of production has passed through some definite stages in all countries and it is reasonable to infer that India is no exception, and that the factory system of production on a large scale, which has already established itself in some industries, must sooner or later supersede the small

scale production which still prevails. But it is not absolutely certain that this should happen in India as in other highly industrialized countries. All nations are not alike in their social and economic life. There is, therefore, some force in the contention that the factory system may not prove quite suitable to Indian ways of living and thinking and that some other system of production suited to the Indian environment may be established.

3. Write an essay in Malayalam on *one* of the following subjects:— 50

- (a) The economic resources of Malabar.
- (b) The importance of means of communication in the economic life of a country.
- (c) Spending and saving.

## GENERAL ECONOMICS

*Paper-setter*—DR. JITENDRAPRASAD NIYOJI, M.A., PH.D.

*Examiner*—DR. NALINAKSHYA SANYAL, PH.D.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Distinguish between prime and supplementary costs, and examine the bearing of this distinction on the theory of value.

2. Discuss the causes favouring the formation of trusts. What, in your opinion, is the best means of minimizing the evils associated with trusts?

3. Consider the effect of a change in the bank rate of discount on (a) wholesale trade, (b) the stock exchange, and (c) international gold movements.

4. Distinguish between mint price of gold and value of gold. Indicate the factors by which value of gold is determined.

5. Describe a Clearing House and the economic service it renders.

6. Explain why wage rates vary in (a) different occupations, (b) in different countries, and (c) at different times.

7. Show how the competition of lenders and borrowers in the money market tends to make the rate of interest coincide with the marginal productivity of capital.

Consider the effect of a series of great inventions on the rate of interest.

8. 'When we buy manufactured goods abroad we get the goods and the foreigner gets the money. When we buy the manufactured goods at home we get both the goods and the money.' Examine this statement.

9. Discuss the theories which have been put forward to account for the cyclical nature of trade fluctuations.

10. How far is equity in taxation attained by (a) an income tax, and (b) a tax on expenditure?

## INDIAN ECONOMICS

*Paper-setter*—DR. PRAPHULLACHANDRA BOSE, M.A., PH.D.

*Examiner*—MR. NRIPENDRANATH DATTA, M.A.

*The questions are of equal value.*

*Attempt ANY FIVE questions.*

1. What are the mineral resources of India? Describe their distribution over the country?
2. Explain the causes of variation in the density of population in India.
3. Briefly describe the economic effects of caste and joint-family.
4. Explain the chief characteristics of an agricultural as compared with those of a manufacturing country.
5. State and critically examine the present position of Indian currency.
6. Would you advocate 1s. 6d. or 1s. 4d. as the exchange rate? Give reasons.
7. Briefly describe the organization of the Indian money market. Can you suggest any improvement?
8. What are the attributes of a sound tax-system? Examine the Indian system in the light of the above.
9. Explain the merits and defects of the permanent and temporary settlement of land revenue in India. Which do you prefer?
10. Write notes on *any three* of the following :—  
 Home charges, Occupancy tenant, Limited liability, Village banks, Protective tariff, Imperial preference.

## ACCOUNTANCY

*Paper-setter*—MR. S. N. MUKHERJEE, B.A., F.S.A.A.

*Examiner*—MR. NARENDRANATH SARKAR, M.A.

*The questions are of equal value.*

1. (a) The following Journal entries, without narrative, are found in the books of a Businessman :—

	Rs.		Rs.
Jan. 1st, Bills Receivable Dr.	300		
To X                      ...	...	...	300
Sundries                      Dr.			
To Bills Receivable            ...	...	...	300
Cash                              ...	295		
Interest and Discount            5			
X                                  Dr.	300		
To Bills Payable                ...	...	...	300



				Rs.	As.	P.					Rs.	As.	P.
April 4th,	Bills Payable	Dr.		300	0	0							
	To Cash	...					...		300	0	0		
	X	To Cash	...	Dr.	300	8	0		...	300	8	0	
	To Cash	...					...		300	8	0		
	Bills Receivable	Dr.		305	8	0							
	To X	...					...		305	8	0		
	X	To Interest and Discount	Dr.	5	0	0							
	To Interest and Discount						...		5	0	0		

State, in the form of narrative to the entries, what you understand the entries to mean. What is the position on the 5th April?

(b) Define 'a secured creditor.'

2. P and Q were equal partners in a business from which P retired on 31st December, 1933.

The Balance Sheet of the firm was then as follows:—

*Balance Sheet, 31st December, 1933.*

	Rs.		Rs.
Capital A/c. P ...	5,100	Plant and Fixtures ...	800
Do. Q ...	2,600	Stock ...	3,600
Sundry Creditors ...	2,200	Sundry Debtors ...	4,000
		Cash ...	1,500
	<u>Rs. 9,900</u>		<u>Rs. 9,900</u>

Under the Partnership Agreement, a Partner retiring was entitled to be paid, for his share of the Goodwill, two years' purchase of his share of the profits, based upon the average of the three years preceding his retirement. The profits of the firm for the last three years were Rs. 9,600.

Any bad debts incurred in the realization of the Debtors were to be taken as bad debts of the firm at the date of any retirement, but not so to affect the figures previously used for the calculation of the amount of Goodwill. These amounted to Rs. 200.

It was agreed that P should be paid out, with interest at 5% per annum, by half-yearly instalments of Rs. 1,000 (covering interest and principal) until discharged, the first payment being made on 30th June, 1934. So far as the Debtors and Creditors were concerned, interest was only to be calculated from the date of receipt or payment.

You are required to show P's account up to 31st December, 1934, assuming that the Creditors were paid and the Debtors realized at an average date of six months.

3. (a) Four hundred shares of Re. 1/- (one) each in the Unproductive Manufacturing Co., Ltd., were allotted to P. Ghosh on 30th June.

He paid -/4/- on application and -/4/- on allotment. A first call of -/4/- per share was made payable on 1st September, but this Ghosh failed to pay, and the Directors decided to forfeit his shares. Notice of intention to forfeit was given on 1st November, and as the call still remained unpaid, the shares were duly forfeited on 1st December. In the meantime, a second call of -/4/- per share has been made, payable on 1st December.

On January 1st. the forfeited shares were re-issued as fully-paid to R. Basu at the price of -/14/- per share.

Make the entries in the books of the Company necessary to record the above transactions.

(b) Distinguish between 'Shares' and 'Bonds.'

4. In the Bad Debt A/c of a business, there was brought forward at 1st January, 1934, a sum of Rs. 1,800 as a reserve against 'Bad and Doubtful Accounts'. During the year 1934, the Account was debited with various bad debts amounting to Rs. 1,955. The Reserve to be carried forward to next year amounts to Rs. 1,400. Raise the Ledger Account, showing these entries, and the amount to be charged to Profit and Loss Account on the 31st December, 1934.

5. (a) What is meant by Double Entry Book-Keeping? State some of its advantages, and give your reasons for considering whether it is, or is not, adaptable to every kind of business.

(b) Define :—

(i) Pro-note, (ii) I.O.U., (iii) Bills of Exchange, (iv) Banker's Drafts, (v) F.O.B.

## ECONOMIC GEOGRAPHY

*Paper-setter & Examiner*—DR. MANMOHAN RAY, M.A., D.Sc.(LOND.), Ph.D.

*The questions are of equal value.*

*Only six questions are to be attempted.*

1. Discuss the idea of the world being divided into more or less self-supporting economic units. What, in your view, are the possibilities of the British Empire becoming such a self-contained unit?

2. State what you know about the regulation of supply of the non-ferrous metals in the world. In what way is India being affected by the developments?

3. What do you know of the second Rubber Restriction scheme? How does it compare with the Stevenson scheme of the Twenties?

4. In view of the growth of economic nationalism, discuss the prospects of the continuation of the exports of India's raw materials on the pre-depression scale, to Central Europe under the following heads: Jute, Cotton, Rice, Oilseeds, and Hides and Skins.

5. On a good map, locate Vizagapatam and state briefly the prospects of the port. How are Calcutta, Madras, and Bombay going to be affected by the development of this port?

6. What, in your opinion, will be the effect of the Indo-Japanese Textile Agreement on the trade between the two countries? How will the balance of account of India and Japan be affected by the measure?

7. What is the nature of trade between Great Britain and Ireland? How is this trade going to be modified by the recent political developments between the two countries?

8. The high tariff in U.S.A. renders the importation of foreign manufactured goods into that country difficult. At the same time, U.S.A. is a creditor country with generally a favourable balance of trade. How then is she to receive payment from outside?

9. Discuss the nature of trade between India on one side and the South American States of Brazil, Argentine, and Chile on the other. In what way do you expect this trade to be modified in the near future?

10. On a sketch map, locate the distribution of Africa's goldfields. What do you think of the prospects of the West African fields as competitors of the Rand mines?

## BUSINESS ORGANISATION

*Paper-setter*—MR. NARENDRANATH SARKAR, M.A.

*Examiner*—MR. DWIJENDRAKUMAR SANYAL, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

### GROUP A

*Attempt ANY THREE questions from this group.*

1. In many instances, it has been noticed that a Sole Proprietorship or partnership has, after some years of its existence, been converted into a Limited Liability Company.

Explain in detail the various reasons which might have prompted this conversion. 20

2. Distinguish carefully between a Multiple Shop and Departmental Stores, giving at least one example of each kind in business in Calcutta. 20

3. Explain clearly, in general terms, how business on a Stock is usually carried on. 20

4. What do you mean by duty on goods, and why is it levied? Distinguish clearly between Customs Duty and Excise Duty. 20

5. What is a Central Co-operative Bank? Show how it can finance (indirectly) agriculture in rural areas. 20

6. What is Charter Party? Discuss the clause dealing with Excepted Perils in a Charter Party. 20

### GROUP B

*Attempt ANY TWO questions from this group.*

7. Explain clearly the difference between Industry and Trade. What do you mean by International Trade? Fully discuss its utilities. 10

8. Explain how the Foreman acts as the connecting link between the Workmen and the Works Manager. What would you consider to be his essential duties? 10

9. Distinguish between Bottomry and Respondentia Bonds. Very fully discuss the peculiar features of these two kinds of bonds. 10

10. Give a short account of the origin, development, and present method of working of what is known in the shipping world as the Corporation of Lloyds. 10

## GROUP C

*Attempt ANY ONE question from this group.*

11. Complaints have been received by a firm of Calcutta Manufacturers that a retailer in the country is selling their manufactured products below the minimum retail prices.

Draft a suitable letter to be sent to the retailer. Also draft another letter containing his reply refuting the charges generally and explaining why in a very few cases he had been compelled to sell below the minimum retail prices under very special circumstances. 20

(Letters should be complete in all details).

12. Prepare a *précis* of the following correspondence:— 20

## FIRST LETTER.

High Street,  
Kingston,  
June 2, 1934.

Messrs. A. B. & Co.,  
Leadenhall Street, London.

Dear Sirs,

I have been recommended to you by my friend, Mr. Jones, White Lion Street, Exeter, who is a client of yours.

Will you please buy for me £400 Canada, 4% Bonds as soon as they are ex-dividend, and on receiving contract I shall forward cheque for the amount.

Mr. Jones tells me that you charge him only half commission, and I shall be glad if you can place me also on the same footing.

Yours truly,  
C. Chambers.

## SECOND LETTER

Leadenhall Street,  
London,  
June 4, 1934.

Mr. C. Chambers,  
High Street, Kingston.

Dear Sir,

We are duly in receipt of yours of the 2nd instant, and are obliged to Mr. Jones for mentioning our name to you. Any orders with which you may favour us shall receive our best attention, and we shall, as in Mr. Jones's case, charge you half commission only.

We note your instructions to purchase £400 Canada 4% Bonds, ex-dividend; they will be thus quoted on the 6th instant, when we shall carry out your order and forward you contract.

Yours faithfully,  
A. B. & Co.

## THIRD LETTER.

Leadenhall Street,  
London,  
June 6, 1934.

Mr. C. Chambers,  
High Street, Kingston.

Dear Sir,

Enclosed we send you contract for purchase of £400 Canada 4% Bonds, ex-dividend, as instructed. In sending cheque for the amount, kindly instruct us whether, when the Bonds are delivered, we are to forward them to you by registered post, whether you will call for them, or otherwise.

Yours faithfully,  
A. B. & Co.

## FOURTH LETTER.

High Street,  
Kingston,  
June 8, 1934.

Messrs. A. B. & Co.,  
Leadenhall Street, London.

Dear Sirs,

I have received yours of the 6th instant, enclosing contract, for which I send you cheque herewith.

Please return the contract receipted, and hand over the Bonds, when delivered, to my bankers, Messrs. Brown & Co., of Cornhill, advising me of your having done so.

Yours faithfully,  
C. Chambers.

## FIFTH LETTER.

From  
A. B. & Co.,  
Leadenhall Street,  
London, E.C.

To  
Mr. C. Chambers,  
High Street,  
Kingston.

In accordance with instructions in yours of the 8th current, we have this day handed to Messrs. Brown & Co., 501, Cornhill, £400 Canada 4% Bonds bought on your account.

Yours faithfully,  
A. B. & Co.

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## INLAND AND FOREIGN TRADE

*Paper-setter*—DR. JOGISCHANDRA SINHA, M.A., PH.D.

*Examiner*—DR. HIRENDRALAL DE, M.A., D.Sc.

*Answer ANY SIX questions.*

1. 'The one condition at once essential to, and also sufficient for, the existence of international trade is a difference in the comparative, as contradistinguished from the absolute, cost of producing the commodities exchanged.'

Explain this statement with the underlying assumptions.

2. Describe the present commercial organization for the distribution of imported goods from Calcutta to the mofussil trade centres in Bengal. Are the credit facilities at present used in this trade quite satisfactory?

3. How is the great bulk of imports into India from European countries usually financed? Are you in favour of an increase in the use of rupee bills in our import trade?

4. Describe the present position and future prospects of the export trade of the following Indian products: (a) Tea, (b) Raw jute, and (c) Oilseeds.

5. Discuss the leading features of the Indo-Japanese Trade Agreement of 1934. Do you agree with the view that the agreement will on the whole prove disadvantageous to India?

6. Why is the greater part of India's foreign trade concentrated in her five chief ports? Describe the nature of the trade of each.

7. Discuss the importance of marine insurance in seaborne trade, and distinguish clearly between a 'general average loss' and a 'particular average loss.'

8. *A* in Calcutta exports jute to *B* in London, the draft to be drawn in sterling at 90 days sight under documentary credit arranged in London. Trace in detail the above transaction, explaining every stage in the process.

9. (a) A Calcutta merchant owes Paris Fcs. 29,000 and a bill on Paris can be obtained at 2'8as. per franc. If the exchange on London is 1s. 6½d. and London quotes Paris at Fcs. 76'50 which is the best way of payment, direct or *via* London? Neglect charges.

(b) London quotes Milan short Lira 58'65 per £1. Bank discount in Milan is 3%. Allowing ½ per mille for stamp duty and ¼ per mille for risk, calculate the long rate for 3 months' trade bill on Milan.

10. Write notes on any four of the following:—

- (a) Trust receipt.
  - (b) Charter party.
  - (c) Favourable exchange.
  - (d) *Ad valorem* and specific duties.
  - (e) Bill of sight.
  - (f) Bonded warehouse.
-

## ELEMENTARY COMMERCIAL LAW

*Paper-setter*—MR. S. GHOSH, BARRISTER-AT-LAW

*Examiner*—DR. SANTIBHUSAN DATTA, M.A., PH.D., BAR-AT-LAW

*Candidates shall give their answers in their own words as far as practicable.*

*The questions are of equal value.*

*Answer FOUR questions from EACH half.*

### FIRST HALF

1. What constitutes an agreement? Discuss the case of *Carlill v. Carbolic Smoke Ball Co.*

2. Distinguish between a contract of guarantee and a contract of indemnity.

*A* sells and delivers 100 bales of cotton to *B*. *C* afterwards, without consideration, agrees to pay for them in default of *B*. What are the rights of *A* against *C*?

3. Is an agent personally liable for contracts entered into by him on behalf of his principal? If so, in what cases?

*A* enters into a contract with *B* to sell him 100 maunds of sugar. *A* afterwards discovers that *B* was acting as agent for *C*. What are the rights of *A* in respect of the price of sugar?

4. What are the rights and liabilities of a minor who has been admitted to the benefit of a partnership?

5. When and how does property pass in a contract for the sale of unascertained goods?

Goods are delivered to the buyer 'on approval'. When does the property in the goods pass to the buyer?

6. How are damages for breach of a contract assessed?

7. What is the standard of care a bailee has to take in respect of goods bailed to him?

*A* leaves with *B* 100 maunds of Java sugar worth Rs. 5 a maund. *B*, without *A*'s consent, mixes the same with country sugar of his, worth only Rs. 3 a maund. What are the rights of *A* against *B*?

### SECOND HALF

1. Distinguish between pledge, mortgage, and lien.

2. Define and discuss the following:—

(a) Usufructuary mortgage, (b) English mortgage, and (c) Mortgage by conditional sale.

3. Define a promissory note, and distinguish it from a bill of exchange.

Which (if any) of the following is a promissory note?—

(a) 'I promise to pay *B* Rs. 500 and all other sums which shall be due to him.'

(b) 'I acknowledge myself to be indebted to *B* in the sum of Rs. 1,000 to be paid on demand for value received.'

4. In what cases is presentment of a bill of exchange unnecessary?

5. What is a private company? How does it differ from a public company?
6. How can a voluntary winding up of a company be brought about? How is a liquidator appointed in such winding up?
7. What is a submission to arbitration? What is the effect of a submission to arbitration on an action?
8. What is the difference between a Bill of Lading and a Charter Party?

## BANKING AND CURRENCY

<i>Paper-setters</i> —	{ MR. A. C. SENGUPTA, M.A. SIR J. C. COYAJEE, KT., B.A., LL.B.
<i>Examiners</i> —	{ DR. B. RAMCHANDRA RAU, M.A., PH.D. HARISCHANDRA SENHA, M.Sc., PH.D.

### FIRST PAPER

*Answer six questions only.*

*The questions are of equal value.*

1. How does the Indian Companies' Act distinguish banks from other companies?
2. What is the significance of crossing a cheque generally; crossing a cheque specially; crossing a cheque 'not negotiable'; and restrictive crossing of cheques?  
What risks does a bank run if it pays a cheque contrary to crossing?
3. Why are commercial banks generally unwilling to advance money against land and buildings?
4. What changes has the Currency and Bank Notes Act of 1928 effected as regards the issue of notes in England?
5. Explain the different items that appear on the balance sheet of a joint-stock bank.  
How will you test the position of a bank from the point of view of a depositor?
6. Explain the working of any clearing house system. What services does a clearing house system render to the banking system of a country?
7. Explain the fixed fiduciary reserve system and the proportional reserve system of note issue, and discuss the advantages and disadvantages of each system.
8. Explain how a Central Bank may control credit (i) by manipulation of the bank rate, and (ii) by open market operations.  
Which of these, in your opinion, is better?
9. Why has it been necessary to have a reserve bank for India? Why could not the Imperial Bank of India perform the functions of a Central Bank?



## SECOND PAPER.

*The questions are of equal value.*

*Answer FIVE questions only.*

1. 'The value of gold tends to equal its marginal cost of production, but is not determined by it.' Elucidate this proposition.
2. What are the characteristic features of the Gold Standard? Discuss the merits and defects of that standard.
3. Compare the merits of the policies of (a) an absolutely stable price-level, and (b) a gently rising price-level.
4. 'Neither in practice nor even in theory is it possible to measure accurately changes in the value of money.' Explain this statement fully.
5. How do changes in the supply of money lead to changes in prices and in money earnings?
6. Discuss the nature and advantages of elasticity of currency. How far, and by what means, has such elasticity been secured in the case of India?
7. Indicate the characteristic features of the monetary system which has prevailed in India since the year 1931.
8. Estimate the comparative importance of price-stability and exchange-stability as objectives of monetary policy in the case of a country like India.
9. Discuss the merits and weak points of the Gold Exchange Standard as a monetary system with reference to the experience of India with that standard.
10. In what ways will the formation of the Reserve Bank of India assist the development of the Indian money market on sound lines?
11. Show that Foreign Exchanges are influenced both by (a) relative price-levels, and (b) the balance of trade.

## ACCOUNTANCY AND AUDITING

<i>Paper-setters—</i>	{	MR. NARENDRAKUMAR MAJUMDAR, M.A.
	{	MR. RANJIT RAY, M.A., A.C.A., F.R.E.S.
<i>Examiners—</i>	{	MR. G. BASU, B.A., A.S.A.
	{	MR. PRAPHULLACHANDRA NANDI, B.Sc. (Cal.), B.A. (Cantab.)

## FIRST PAPER.

*Answer any SIX questions.*

*The questions are of equal value.*

1. The following information relates to a new public company :—  
*Receipts.*—From allotment of 10,000 Ordinary Shares of Rs. 10 each, Rs. 93,000 ; from allotment of 20,000 Preference Shares of Rs. 5 each,

issued as paid up to the extent of Rs. 2-8-0 per share in consideration of old business, Rs. 50,000; Mortgage on Premises, Rs. 40,000; Trading Receipts, Rs. 30,000; Sale of Investments, Rs. 9,000; Loan from Bank, Rs. 50,000.

*Payments.*—Purchase of Freehold Buildings, Rs. 75,000; Purchase of Machinery, Rs. 6,000; Preliminary Expenses paid on account, Rs. 2,500; Purchase of Investments, Rs. 1,60,000; Trading Payments, Rs. 7,000.

*Owing.*—Balance of Preliminary Expenses, Rs. 450.

You are required to prepare a Statutory Report, with necessary certificates, and to state the requirements of the Indian Companies Act in relation to Statutory Meetings.

2. *A, B, and C* are in partnership, sharing profit and loss in the proportion of  $\frac{1}{2}$ ,  $\frac{1}{3}$ , and  $\frac{1}{6}$ th respectively. Partners in addition are entitled to draw interest @ 6% on their loan accounts. From the following figures you are required to prepare a Profit and Loss Account for the year ending 31st December, 1933, and Balance Sheet as at the 31st December, 1933 :—

*A:* Capital Account, Rs. 6,000; *B:* Capital Account, Rs. 4,000; *C:* Capital Account, Rs. 2,000; Stock, Rs. 11,000; Purchase, Rs. 22,000; Furniture, Rs. 3,800; *A:* Loan Account, Rs. 10,000; Sundry Creditors, Rs. 13,000; Buildings, Rs. 15,000; Expenses during the year, Rs. 24,000; Liabilities, Rs. 2,500; Rebates paid, Rs. 2,000; Sales, Rs. 61,000; Rebates received, Rs. 2,500; Reserve Fund, Rs. 10,000; Cash in hand, Rs. 600; Bank, Rs. 12,000; Debtors, Rs. 26,600; *A:* Drawing Account, Rs. 2,000 Credit; *B:* Drawing Account, Rs. 3,000 Credit; *C:* Drawing Account, Rs. 1,000.

You are required to depreciate Furniture by 10% and Buildings by 2½%. Closing Stock was Rs. 18,707.

3. On going through the accounts of a company you find the following errors. You are requested to make journal entries with explanations correcting them, and to work out the difference such corrections will make to the Profit and Loss Account of the company.

- (a) Sales amounting to Rs. 135 credited to rebates received account.
- (b) Rs. 320 received from C. D. & Co. credited to the account of J. B. & Co.
- (c) Rs. 250 paid for travelling expenses debited to the account of Mr. C., traveller.
- (d) Rs. 212 liability for commission taken into the books as commission receivable.
- (e) Rs. 3,000 paid for repairs debited to Building Account.
- (f) Rs. 450 for Furniture purchased debited to Plant and Machinery.
- (g) Rs. 620 refund of security deposit by G. & Co. debited to the account of G. & Co.
- (h) Motor Car purchased for Rs. 2,500 debited to travelling Account.
- (i) Insurance premium Rs. 350 which has six months to run wholly charged off.
- (j) Difference in Trial Balance of Rs. 49/11/- written off to Profit and Loss Account. It was found however that this error was due to a misposting of Rs. 55 as Rs. 5/5/- to the debit of Charges General Account.

4. The Delta Manufacturing Co., Ltd., was registered on the 1st April, 1934. The Authorized Capital of the company was Rs. 20,00,000 divided into 10,000 Ordinary Shares of Rs. 100 each, and 1,00,000 6% Preference Shares of Rs. 10 each. The amount payable on application and allotment on Ordinary Shares was Rs. 50 per share and on Preference Shares Rs. 3 per share. The shares applied for together with the sums payable thereon are given below :—

Date.	Preference Shares.	Ordinary Shares.
3-4-1934	...	5,000
4-4-1934	...	10,000
5-4-1934	...	12,000
6-4-1934	...	18,000
7-4-1934	...	6,000
8-4-1934	...	9,000
9-4-1934	...	20,000
10-4-1934	...	7,000
11-4-1934	...	13,000

All these shares were allotted by the directors at a meeting held on the 12th of April, and at a meeting of the directors held on the 30th April a call of Rs. 25 per share on Ordinary Shares and Rs. 2 per share on Preference Shares was made payable on the 15th May. The amounts received from these calls were as follows :—

Date.	Preference Shares.	Ordinary Shares
15-5-1934	8,000	1,000
16-5-1934	16,000	2,000
17-5-1934	21,625	585
18-5-1934	5,619	731
19-5-1934	13,129	.....
20-5-1934	11,233	.....

You are required to show the entries recording the above in the Company's Books, and prepare a Balance Sheet as on the 21st May, taking the following facts into account. All sums received from Ordinary Shareholders were deposited with the A. B. Banking Co., and all sums received from Preference Shareholders were deposited with C. B. Bank, Ltd., except Rs. 32,000 received in cash on the 16th May, out of which Rs. 3,231 was paid for Preliminary Expenses on the same day.

5. From the following figures prepare Trading, Profit, and Loss A/c. and Balance Sheet. Value of Stock 31st December, Rs. 7,23,300. You are required to (a) depreciate Plant and Machinery @  $7\frac{1}{2}\%$  per annum, (b) Patents @  $15\%$  per annum, (c) Premises @  $5\%$  per annum, (d) Provision for Bad and Doubtful Debts @  $5\%$ .

Purchases, Rs. 34,19,052; Bank Overdraft, Rs. 48,360; Stock, Rs. 3,95,352; Bills Payable, Rs. 1,85,400; Patents, Rs. 9,360; Share Capital, Rs. 9,00,000; Freehold Premises, Rs. 30,156; Unclaimed Dividend, Rs. 636; Wages (remunerative), Rs. 1,50,540; Wages (unremunerative), Rs. 12,360; Bad Debts Reserve, Rs. 900; Unpaid Calls, Rs. 1,200; Cash Office, Rs. 750; Sundry Creditors, Rs. 54,516; Bad Debts, Rs. 2,856; Repairs to Buildings, Rs. 336; Returns Out, Rs. 9,000; Interest on Overdraft, Rs. 1,560; Rents Received, Rs. 1,560; Sales, Rs. 30,25,218; Plant and Machinery, Rs. 60,840; Bills Receivable, Rs. 36,360; Salaries and Directors' Fees, Rs. 20,400; Rates and Taxes, Rs. 9,468; Debtors, Rs. 31,050; Sundry Office Expenses, Rs. 1,650; Profit and Loss Account Dr. Balance from last year, Rs. 42,300.

6. Mr. A and Mr. B, trading as A. B. & Co., desire to convert their firm into a limited liability company with as authorized capital of Rs. 1,00,000 divided into 5,000 Ordinary Shares of Rs. 10 each and 5,000,

6% Preference Shares of Rs. 10 each. Their Balance Sheet as at 30th June, 1934, was as follows :—

	Rs.		Rs.
A : Capital Account ...	30,000	Land and Buildings ...	20,000
B : Capital Account ...	14,000	Stock ...	32,000
Loans ...	21,000	Debtors ...	16,000
Creditors ...	13,500	Plant and Machinery ...	14,000
Reserve Account ...	10,000	Cash ...	6,500
	<hr/>		<hr/>
	88,500		88,500

A and B share Profit and Loss equally, and it is decided that this arrangement should continue in the new company, but any inequality of Capital should be adjusted by the issue of 6% Preference Shares to one of the partners. It was further resolved that the reserve account should be credited to the partners' capital accounts after providing for loss on revaluation of the assets to be taken over by the new company. A revaluation gives the following changes: (a) Land and Buildings, Rs. 23,000; (b) Stock, Rs. 30,000; (c) Plant and Machinery, Rs. 9,000.

You are required to prepare the opening Balance Sheet of the New Company on the above basis.

7. Jnanendra Mukherji became bankrupt. From the following particulars prepare his Statement of Affairs and Deficiency Account :—

Unsecured Creditors: Trade Debts, Rs. 8,500; Household Debts, Rs. 160.

Trading Profits and Losses: First Year Profit, Rs. 2,000; Second Year Loss, Rs. 1,000; Third Year Loss, Rs. 600; Fourth Year Profit, Rs. 300; Fifth Year Loss, Rs. 2,300.

Yearly Drawings, Rs. 800.

Fully Secured Creditors (holding Securities estimated to produce Rs. 10,000), Rs. 7,000; Liability on Bills Discounted (of which Rs. 100 is expected to rank), Rs. 1,060; Creditors for Rent, Rs. 150; Creditors for Rates, Rs. 30.

Book Debts (Good, Rs. 1,100; Doubtful, Rs. 1,000, expected to produce Rs. 600; Bad, Rs. 100), Rs. 1,880.

Bills Receivable, good, Rs. 650.

Cash at bank and in hand, Rs. 15.

Stock (estimated to produce Rs. 1,750), Rs. 2,100.

Capital at commencement of first year, Rs. 7,483.

Household Furniture (estimated to produce Rs. 550), Rs. 700.

Office Furniture (estimated to produce Rs. 100), Rs. 168.

8. Prepare a Revenue Account and Balance Sheet from the following list of balances in the books of Indian Assurance Co., Ltd., in accordance with prescribed forms, and with necessary auditor's certificate :—

Assurance Fund at the beginning of the year, Rs. 36,00,000; Annuities Paid, Rs. 12,500; Bonuses to Policy-holders, Rs. 15,000; British Government Securities, Rs. 1,90,000; Consideration for Annuities granted, Rs. 14,000; Claims Admitted, but not paid, Rs. 14,500; Claims Paid, Rs. 2,80,000; Commission Paid, Rs. 27,000; Cash at Bank, Rs. 45,000; Expenses of Management, Rs. 37,000; India Government Securities, Rs. 1,10,000; Interest and Rents received, Rs. 1,30,000; Loans on Company's policies, Rs. 2,80,000; Leasehold Ground Rents (Investments), Rs. 6,000; Mortgages within India, Rs. 8,00,000; Mortgages on Rates Rs. 12,00,000; Other sums owing by the company, Rs. 1,200; Outstanding Premiums and Agents' Balances, Rs. 56,000; Outstanding

Interest (receivable), Rs. 57,000; Premiums, Rs. 4,60,000; Premises and Furniture, Rs. 26,000; Reserve Fund, Rs. 1,50,000; Rent Charge (Investments), Rs. 36,200; Railway and other Debentures, Rs. 11,50,000; Surrenders, Rs. 42,000.

9. *A* and *B*, colliery proprietors, take a 21 years' lease at a dead rent of Rs. 12,000 per annum, merging into a royalty of Re. 1 a ton. The dead rents are recoverable out of royalties paid within five years. 800 tons were raised the first year, 4,600 the second year, and 75,000 the third year. 100 colliery wagons were purchased on the hire-purchase system, by which the wagons, at the end of ten years, became their absolute property in consideration of Rs. 15 a month for each wagon. It was assumed by the firm that each wagon would be worth Rs. 800 at the end of the ten years. Show the Ledger Accounts for Dead Rents, Royalties, Purchase of Wagons, for the first three years.

## SECOND PAPER.

*Answer ANY SEVEN questions.*

*The questions are of equal value.*

1. Is an auditor under obligation to satisfy himself as to the adequacy of the provision for Bad and Doubtful Debts? If such obligation exists, what procedure would you adopt to discharge it?

2. (a) Can a limited company, formed to work a wasting asset such as a mine, legally divide in dividends the excess of the proceeds of working over the expenses incurred therein, or must it set aside an annual sum to cover the estimated diminishing value of the asset?

(b) Can a limited company, which has suffered trading losses in its first two years, legally pay dividends out of profits earned subsequently without first making good out of such profits its earlier trading losses?

Give reasons for your answers, with illustrations from decided cases.

3. Write a short essay dealing with the auditor's duty in connection with stock-in-trade, referring to the leading cases in the matter.

4. Draft an audit programme for the audit of one of the under-mentioned businesses :—

- (a) A cloth mill ;
- (b) A retail stationer ;
- (c) A club ;
- (d) Life Assurance company.

5. How would you vouch the following payments appearing in the Cash Book of a limited company?—

- (a) Bearer securities purchased and deposited with the company's bankers.
- (b) Debentures redeemed.
- (c) Insurance premiums.
- (d) Payments made under hire-purchase agreement.
- (e) Reimbursement to a director of the company of income-tax paid by him on his Director's fees.
- (f) Directors' travelling expenses.
- (g) Payments made under a building contract.

6. State carefully the principles you would adopt, and your reasons for so doing, when allocating the following to Capital and/or Revenue:—

(a) Stock valued at Rs. 15,000 and Machinery appearing in the books at a value of Rs. 9,000 destroyed by fire, and for which Rs. 15,500 and Rs. 10,300 respectively were received from an Insurance Company.

(b) Structural alterations to buildings.

(c) Compensation paid to a Managing Director, serving under an agreement, for the termination of the agreement before its expiration.

(d) Conversion of Gas Plant to Oil Fuel Plant for generation of electricity.

7. What are the objects of Secret Reserves? State how they are created, and give a few reasons in support of, and against, them respectively.

8. Indicate the points to which you would direct particular attention in auditing :—

(a) Share Capital and Debenture Accounts.

(b) Dividend and Interest on Debenture Accounts.

9. How would you verify the following assets in the Balance Sheet of a company?—

(a) Cash at Bank.

(b) Loan on Mortgage.

(c) Bills receivable.

(d) Freehold property, the deeds of which are lodged with a Calcutta Bank as security for possible advances.

(e) An Investment, sold after the date of the Balance Sheet but before your audit.

10. What do you understand by a 'Continuous Audit'?

State briefly the advantages of, and objections to, an audit of this nature.

## ECONOMICS OF TRANSPORT

*Paper-setters*— { MR. W. A. BURNS, M.A., BARRISTER-AT-LAW.  
MR. MOHITKUMAR GHOSH, M.A., B.COM. (LOND.).

*Examiners*— { MR. HARIDAS GHOSH, M.A.  
MR. J. MAJUMDAR, M.A.

### FIRST PAPER.

*The questions are of equal value.*

*Answer ANY FIVE of the following questions.*

1. Account for the causes leading to combinations among railway companies, and also state the forms which these combinations generally assume.

2. Examine the constitution and functions of the Indian Railway Rates Advisory Committee, and also examine the necessity for replacing it by a Railway Rates Tribunal.

3. 'It is sometimes urged that discrimination in freight rates is necessary because the value of the service rendered does not necessarily depend upon the physical work performed.'

Discuss this statement.

4. Examine the effect on rate-making of the fact that railways are undertakings with very large overhead costs.

5. 'It is vital to the interests of a country that the railways should be kept quite free from politics.' Discuss this statement, and suggest means whereby this can be effected in the case of Indian railways under the proposed new constitution.

6. State your views on the concession of favourable railway rates to a locality in India, the geographical position of which is not very favourable.

7. Examine the contention that combination and monopolization is inevitable in railway industry and therefore the State should undertake ownership and operation in this matter.

8. How can co-ordination be effected between road and rail transport in this country? What are the main difficulties in the way of effecting co-ordination in each case?

## SECOND PAPER.

*The questions are of equal value.*

*Answer ANY FIVE of the following questions.*

1. Discuss the importance of 'Transport in the modern industrial' and commercial world. In what directions are further developments likely to take place in India?

2. Write a short account of the part played by State in the provision and administration of Railways in India.

3. State the relative merits of Broad gauge and Metre gauge Railway systems in India. What are the evils of break in gauge? Illustrate by concrete cases.

4. Write a short essay on the passenger traffic of Indian Railways. Suggest means whereby such traffic can be further developed.

5. Examine the advantages and disadvantages of the divisional and departmental system of internal organization in railway industries.

6. State your views regarding the development of roads to meet the growing needs of motor transport in India.

7. Examine in what respects road motors have an advantage, if any, over railways, and state what should be the attitude of the Indian public regarding the development of road services in competition with Indian Railways.

8. State the importance of waterways of Bengal and the place occupied by them in the general transport system of the country.

## MODERN ECONOMIC HISTORY

*Paper-setters*— { DR. ROHINIMOHAN CHAUDHURI, M.A., Ph.D.  
MR. BHUJANGABHUSHAN MOOKERJEE, M.A.

*Examiners*— { DR. ROHINIMOHAN CHAUDHURI, M.A., Ph.D.  
DR. J. C. SINHA, M.A., Ph.D.

### FIRST PAPER.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Indicate the circumstances that gave rise to the capitalistic system of industries in Great Britain.
2. Describe the conditions of labourers in Great Britain during the first half of the nineteenth century. What measures did the Government adopt to improve their condition during this period?
3. Indicate the causes of the decline of British agriculture since 1875. Do you know of any measures that have recently been adopted by the Government to arrest this decline?
4. Trace the development of joint-stock banking in Great Britain. Account for the recent tendency towards amalgamation among joint-stock banks in that country.
5. What were the ideals and methods of trade unionism in Great Britain in the early stages of its growth, and why were they modified after 1840?
6. Discuss the chief phases of the Free Trade movement in Great Britain during the period 1820-1845, and indicate the factors favouring that movement.
7. What were the causes of the suspension of cash payment by the Bank of England in 1797? Were the Government or the Bank Directors responsible for this catastrophe?
8. Explain the circumstances that are responsible for the growth of the co-operative movement in Great Britain. Why is it that productive co-operation has not made any progress in that country?
9. Discuss the effects of the last European war upon British foreign trade.

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### SECOND PAPER.

*The questions are of equal value.*

*Answer SIX questions only.*

1. How far has the Workmen's Compensation Act in India succeeded in its objects? What are the lines on which you would seek to improve it?
2. Discuss how far it would be possible to introduce a scheme of insurance against industrial unemployment in India. How did the Labour Commission try to meet the problem?



3. What were the factors that led to the gradual commercialization of our agriculture in India? Show how it has helped the actual cultivators of the soil.
4. Explain the position and importance of the Coal Industry in India at the present time. What are the factors which have contributed to the recent depression in the coal industry?
5. Explain the reasons which led to the passing of the Deccan Agriculturists' Relief Act of 1879. Discuss briefly its main provisions.
6. Give briefly an outline of the Government of India's policy relating to railway development in India from the pre-Mutiny period. Either justify or criticize the policy.
7. Give the main features of the system of famine relief through State-aid in India. In this connection, show how the truest economy in famine relief is to be prompt and generous with the relief.
8. 'The pegging of the exchange by Government at a parity even higher than pre-war may be taken as one of the contributing factors to a prolonged period of general depression.' (*Gadgil*.)  
Explain the above, and indicate how far you are prepared to justify the criticism.
9. Give the main features of the Reserve Bank of India, and show how it will improve and strengthen the banking and currency conditions in India.
10. What are the consequences of sex-disparity and the lack of family life among the industrial labourers of India? How did the Labour Commission propose to meet the evil?

## PUBLIC ADMINISTRATION

<i>Paper-setters—</i>	{ MR. PRAMATHANATH BANERJEE, M.A., B.L., BARRISTER-AT-LAW. MR. A. K. GHOSH, M.A., BAR-AT-LAW.
<i>Examiners—</i>	{ MR. W. C. WORDSWORTH, M.A. MR. HARIHAR DHAR, M.A.

### FIRST PAPER.

*The questions are of equal value.*

1. 'The remedy of Habeas Corpus protects the personal liberty of the citizen.' (*Jenks*.)  
Explain how.
2. What is the exact relationship between the Prime Minister and his Cabinet in England?
3. What, according to Jenks, are the 'three political rights' of the Sovereign in England? How are they exercised?
4. Write notes on :—  
(a) Board of Education in England, (b) 'Gibson-Bowles' Act, (c) the Convocation of the Clergy, (d) the Comptroller and the Auditor General.
5. What is the constitutional position of the army in England?

6. 'Canada and Australia have both federal constitutions.'  
(Keith.)

Discuss. How would you describe a federal constitution?

7. How can the constitutions of the following countries be amended?—

(a) Canada, (b) Australia, (c) New Zealand.

8. How is the 'colour problem' attempted to be solved in (i) the Union of South Africa, (ii) New Zealand, (iii) Australia?

9. Define prerogative. What are the prerogatives of the Crown in the Dominions?

10. What is the extent of the power reserved by the Imperial Government in matters of (a) Dominion legislation, (b) Colonial legislation?

## SECOND PAPER.

*The questions are of equal value.*

1. Describe the overruling power of the Viceroy, and state (a) the circumstances under which it originated, and (b) under which it is and may be exercised.

2. Discuss, with special reference to actual practice in Indian Administration, the relative advantages and disadvantages of the departmental system.

3. What are the powers and functions of a District Magistrate which make him the head of the district in India? How far does the theory of separation of powers apply to him?

4. How far and to what extent is the power of 'certification' vested in the head of the local government applicable to the Reserved and to the Transferred services respectively?

5. Specify the powers of the Provincial Legislative Council—

- (a) of law-making,
- (b) in financial matters,
- (c) on the Executive,

and state the limitations imposed upon each.

6. In what spheres and to what extent has responsibility been introduced into Provincial Governments in India? Compare the powers and functions of the part which is responsible with those of the part which is not.

7. What are the constitutional modes by which acts, omissions, and measures of the executive may be brought under the consideration of the legislature and there approved, disapproved, or censored? Add short notes to each such mode.

8. Discuss the position of the Railway department in respect of its own finance and audit *vis-a-vis* the Financial department of the Government of India and the Auditor General of India respectively.

9. Indicate briefly the frame of the government, central and provincial, recommended by the Simon Commission.



భారతీయల పేద పట్ల దేశమభివృద్ధికి అవసరమైన పాత్రను పోషించుట. ఇక భారతీయల పనిమేమి? ఏమి కావాలి. తెచ్చుతగుల పట్టనవలసిందిగా సామ్రాజ్య తర భాగములకుండి సామ్రాజ్యము నందే భారతీయుల పనిమలుపవలె, ఉష్ణపవలె, పట్టించవలె చూడవలసింది. స్వామ్య భూమిని పట్టించుట నక భావముననుకూలముగా ఉన్నప్పుడు యిది ద్వితీయము ప్రగల్భములు కాల్చిన బ్రతిష్ఠి ప్రభుత్వము జోరము కలిగించు కొనవలెను. జోరము కలిగించు కొననవలసినది తప్పక గాదు ఇప్పుడు పట్టించుట.

3. Write an Essay in Telugu on any ONE of the following subjects :— 30

- (a) Unemployment in India, its prevention and cure.
- (b) The industrial future of India.
- (c) Banks and their economic effects.

4. Write a report to an English Firm in London on the possibilities of finding an outlet for their goods in the Andhra area. 15

5. Give the English equivalents of the following Telugu Terms. 15

- (1) కౌశల్య ప్రసారము
- (2) కమ్యూనికేషన్ సులభము.
- (3) అంతర్జాతీయ పరిణామము -
- (4) టులక సౌల
- (5) సామ్రాజ్యముల భేదము

## MARATHI COMPOSITION

The figures in the margin indicate full marks.

I खाली दिनेच्या कोणत्याही पांच विषयांची मराठीत स्पष्ट विवेचन करा :— 10

- (1) Power of Attorney; (2) Articles of Association of a company; (3) Agreement of partnership; (4) Insolvent; (5) Bill of lading; (6) Import Tariff.

## II खालील कोणत्याही एका विषयावर मराठीत निलक्ष्य लिहा :—

3

1. The state in relation to Indian industries.
2. Road and railway competition in India.
3. Middle-class unemployment in India.

## III खालील दिलेल्या कोणत्याही दोन पैरियाकांचे मराठीत भाषांतर करा :—

1. In the first place, the town may want earthen vessels as well as the village, and the potter may not have enough to supply everyone. He will naturally sell what he has to his old customers in the village; but some of the townspeople will offer him a higher price, and he will take this from them, unless the villagers also are willing to pay a higher price. Thus the increase in the demand breaks up what has become the old village custom and the potter gets a higher price. 20

2. The use of kerosine oil in Northern India is comparatively recent; formerly light was obtained universally, as it still is in many villages, by burning one of the oils produced from seeds grown locally. When kerosine oil first came into use, it was sent up-country packed in tins and the tins placed in boxes, just as the better qualities of oil are still transported. This method of packing is expensive and cost of carrying oil so packed by rail is considerable. 20

3. By the term supply of labour is meant, not the number of persons qualified to do the work but the number of qualified persons willing to do the work at a particular rate of wages. The number able to do the work is only the extreme limit of supply. Thus, as the commodities, supply cannot be considered apart from price. In the long run, too, it may be said that the supply of labour varies with the price that can be obtained for its services. If the wage offered fall below a certain amount, there might be no supply at all. 20

## IV खालील पॅरियाकांचे इंग्लिशमध्ये भाषांतर करा :—

20

पैसा ही एक अतिशय आवश्यक वस्तु आहे. पैसा मुले पाहिजे असलेली सर्व जिनस पाहिजे त्या वेळीस मिळू शकनात-ज्याचे जवळ खंडी दोन खंडी धान्य आहे त्याला जडरीचे वेली त्या धान्यापेकी थोडे धान्य विकून पैसे करून त्या पैसाच्या योगाने त्याला पाहिजे असलेली जिनस ती विकत घेऊ शकतो. परंतु जगात पैसाचा व्यवहार जर नसता तर आवश्यक जिनसा मिळू शकत नाही, अथवा त्या मिळविण्या करिता अतिशय भास पडला असता ; व इतके करून ही त्या मिळाल्या अथवा याचा ही भरवसा नसता

Money is an essentially necessary thing (or commodity). It can buy necessities when wanted. One possessing a couple of Khandies of corn can exchange it for money in times of need, with which one can buy his necessities. Had money been non-existent, either the necessities would not have been procurable, or they could be procured only at the cost of very great trouble and even then the fact that they could be procured was a matter of uncertainty. (Note—Khandi is a typical measure generally used in grain-market. 8 payalies make one khadava and 20 khd. are equivalent to 1 khandi ).



2. Write an essay in Kanarese on any ONE of the following subjects:—

25

(a) Jubilees—Silver—Golden—Diamond. Its significance in private life and in public life.

(b) Trade Depression—an eye-opener of a country's true position—a blessing in disguise—acute and silent sufferings.

(c) Describe the various types of Insurance and its usefulness in various walks of life.

3. Develop the ideas contained in the following:—

10

ಕೂಲಿ ಪಾ ವಕ ಮಾನ್ಯ ಕೃತ್ರಿ ।  
 ಪೂರ ಸುಬಾಯಕ ಗಾಣ ನವ ಪುತ್ರಕ ।  
 ವೇಶನಿ ಕೃವ ಗೀರಾಲ್ಯ ಕಾಕ ವ್ಯಂಚನಾ ದಿಗ್ಗಜು ॥  
 ಪ್ರಮುಖ ಸುಖಿ ಹಾಕ ಭವ್ಯವು ।

ಧರ್ಮ ಕೆಲಿ ಒಡಿಸುವನು ಮಹದಲ ।

ಕೆಲವುಕೆಲವು ಮಾಡಿ ಬನ್ನಿಮುಣುಬು ಕೆಲವರು ।

4. Paraphrase fully:—

10

ಕೆಂದನಾಡುವ ಬಾಲಲಲಲಯಂ ನೋಡಿ ಕೊಡು ।

ಘೋರಿವಾಕನುಕೆ ಕೇಳು ಮುದ್ದಿನ ಮುದ್ದೆ ।

ಯಂದಕಂಕವನೆತ್ತಿ ಕೊಂಡು ನಡೆದುಕೊಳ್ಳುವವೆತ್ತಿ

ಕೆಂಗುಡುಳ್ಳವನೇವು

ಮುಂದಲೆಯು ಕೆಂದನಾಡುವಾಣಿ ಕೊಡುವ ಬೊಲ ।

ಕೆಂದಕೆಯ ಬಾಯ್ಕೆಕೆಯ ನೈಕೆ ಚುಂಬನೆ ಕೊಡು ।

ಕುಂದಕಾಯೆಂದು ಪ್ರಂಚೊಂದ್ರಿಯ ಪ್ರೀತಿಯಂ

ವಡೆವನ್ನಾವ ಪ್ರಕಾಶು

5. Translate into Kanarese:—

The fact is that Japan in the Far East is in very much the same position as Germany in Europe ; there are even those who suggest that they have concluded a secret treaty whereby their predatory activities will be synchronised. Both countries have found that in the present chaotic

world situation bluff pays. Japan has successfully defied the whole world just by quietly going ahead with her expansionist policy and paying no heed to previous commitments or to diplomatic protests ; in the same way Germany has rehabilitated herself after a crushing defeat, and will in a year or so be as strong as, if not stronger than, she ever was. While all this has been taking place there has been plenty of mediation, both at Geneva and elsewhere. Indeed, in a sense, mediation has been a great asset to Germany and Japan, since it has meant delay, time for them to entrench and face the world with a *fait accompli* ; apart from this it has not altered the course of events by a fraction. As Lord Peel said, Japan has adopted as her slogan, "Asia for the Asiatics", which means "Asia for the Japanese." It is particularly for Great Britain with her eastern empire an ominous slogan.

6. Write a letter to your business friend explaining in about 150 words in Kanarese the value of Reserve Bank to Indians. 15

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## L. T. Examination,

1935

### THE PRINCIPLES OF EDUCATION

*Examiner*—MR. S. P. BISWAS, M.A.

*The questions are of equal value.*

*Answer ANY FIVE of the following questions.*

1. What is your own conception of education? Show how it determines the problems and the scope of Educational Psychology.
2. 'Human nature does not gather grapes of thorns or figs of thistles.' Critically examine the statement, explaining the different theories concerning heredity. Is the influence of heredity beyond the control of the school?
3. A child is very seldom really fatigued. Do you agree? Discuss the value of fatigue.
4. Distinguish between sensation and perception. Show briefly how you are going to train the child's sensation and perception.
5. What is a suggestion? How is it to be adopted for the training of children? Do you regard a teacher who carries suggestion too far to be an ideal teacher?
6. Distinguish between play and work. State the various theories of play. Which, according to you, is the most satisfactory one?
7. Explain critically *any three* of the following:—
  - (a) Formation of habits.
  - (b) Imitation & invention.
  - (c) Plateau of learning.
  - (d) Dalton Plan as a form of Play-way.
8. Show that attention and interest are merely different ways of looking at the same thing. Illustrate the various forms of attention.
9. Find out the place and importance of memory in education. Is good memory identical with cramming? Show how memory can be trained.

## METHOD OF TEACHING AND SCHOOL ADMINISTRATION

Examiners— { Mr. ANATHINATH BASU, M.ED.(LOND.).  
                          „ KSHETRAPAL DASGHOSH, B.A.(CAL.), B.A.(OXON).

### FIRST PAPER

*The questions are of equal value.*

N.B.—Answer Question 8 and FOUR others.

1. How would you teach the alphabet of a foreign language to a class of very small children?
2. What types of oral composition in English do you consider suitable for the middle school? Describe the methods you would employ.
3. What is the Project Method? Outline a project in History for one of the middle forms in a high school, describing fully ideas of working it out.
4. How would you teach Vernacular poetry in Class VII of a high school? Would the procedure be any different if you were teaching English poetry in the same class?
5. Describe the use and relative advantages of maps, pictures, and blackboard sketches, in teaching Geography in the middle forms of a high school. Outline a scheme of group-work with regard to these aids to teaching.
6. How would you treat the following in children?—  
(a) Lying, (b) Retarded progress, (c) Stammering, (d) Slow and untidy writing.
7. 'The teaching of Arithmetic in the infant classes must be made concrete'. Discuss and show by means of illustrations how you would carry this out.
8. Write Lesson Notes on *any one* of the following:—  
(a) The River system in Bengal (Class VI).  
(b) The excavations at Mohenjo-daro and Harappa (Class IX).  
(c) The Digestive System (Class V).  
(d) The Life History of the Frog (Class V).  
(e) Air (Class VI).  
(f) Simple Practice (Class VI).  
(g) The use of the Definite Article in English (Class VII).

### SECOND PAPER

*The questions are of equal value.*

N.B.—Answer Question 1 and FOUR others.

1. What are the fundamental principles of discipline? Classify the main faults from which bad discipline arises in the classroom, with your comments thereon.

Or,

What do you understand by self-government among pupils? Consider its possible working in Indian schools and its advantages and limitations.

2. Discuss the advantages and drawbacks of co-education in schools in Bengal.

3. Discuss the educative and moral values of school-celebrations, such as the Founder's Day or the Prize Distribution or the School Anniversary, etc.

4. 'As a rule, the school library in our schools is neither what it should be nor used as it ought to be'. Expand the above statement, and suggest remedies for the proper organization and use of school libraries for teachers and pupils.

5. Discuss the defects of the class system, and state what attempts have been made to get over these defects.

6. What are the duties of a teacher in connection with the sanitary and hygienic arrangements of the school? Discuss fully.

7. If you had a free hand, how would you fix the curriculum for Class III of your school? Draw up the curriculum and also a time-table, and state the principles by which you would be guided.

## HISTORY OF EDUCATION

*Examiner*--MR. GANGACHARAN DASGUPTA, B.A., B.T.

*The questions are of equal value.*

*Answer FOUR questions, TWO from each group.*

### GROUP A.

1. What benefits do you expect to have from a study of the History of Education?

2. Describe the special characteristics of English Rural Schools at the present time.

3. What changes do you notice in modern education, as contrasted with the old, both as regards ideals and methods?

4. Write short notes on *any two* of the following:—

Dr. Montessori, Pestalozzi, the Monitorial System, the Dalton Plan, Mental Hygiene, and the Project Method.

### GROUP B.

1. Describe briefly the chief provisions of the Bengal Primary Education Act of 1930 with regard to its administrative side.

2. In what ways do you consider the education of our girls in the elementary stage defective? Suggest measures of improvement.

3. What are the objectives of elementary education? How would you realize them in practice in this country?

4. Describe any educational institution in India where attempts are being made to vitalize the education of the countryside.

## ENGLISH COMPOSITION

Examiner—DR. SUHRITCHANDRA MITRA, M.A., D.PHIL.

*The figures in the margin indicate full marks.*

1. Translate one of the following passages into English:— 25

(a) দুই দিন চলিয়া গেল, কোথাও স্থলের চিহ্নমাত্র নাই। কলম্বাসের এত ক্লেশ, এত আয়াস সকলই বৃথা নিফল হয়। তাঁহার প্রাণ উদ্বেগে চঞ্চল হইয়া উঠিল। পরদিন শেষদিন, এ দিন স্থল না পাইলে কলম্বাসকে ব্যর্থ মনোরথ হইয়া ফিরিতে হইবে। কিন্তু সাধু যাহার সঙ্কল্প, ঈশ্বর তাহার সহায়। এতদিনে বিধাতা তাঁহার প্রতি প্রসন্ন হইলেন। ১১ই অক্টোবর বৃহস্পতিবার, প্রথমে একটা বৃক্ষশাখা ভাসিয়া গেল তাহাতে সজ্জা চেরিফল। কিছুক্ষণ পরে খোদাই করা একখানা ছড়ি। উৎসাহে, আনন্দে, উদ্বেগে সকলেই আকুল হইয়া উঠিল। সে রাত্রে আর কেহ নিদ্রা গেল না। শেষরাত্রে কি আনন্দধ্বনি! অবশেষে সত্য সত্যই স্থল দেখা গেল; নাবিকেরা আনন্দে কেহ গাহিতে লাগিল, কেহ নাচিতে লাগিল, কেহ বা কাদিয়া ফেলিল। সকলেই ঈশ্বরকে ধন্যবাদ দিল যে এতদিনে তাহাদের সকল শ্রম সার্থক হইল। কলম্বাসের মনের ভাব কে বর্ণনা করিবে? এইরূপে ১৪৯২ খৃষ্টাব্দে ১২ই অক্টোবর প্রত্যুষে, নতুন মহাদেশের অস্তিত্ব আনন্দে ঘোষিত হইল।

(b) স্বদেশের প্রতি প্রত্যেক মানবের স্বাভাবিক অনুরাগ দৃষ্ট হইয়া থাকে। আমরা বাঙ্গালী, বঙ্গদেশ আমাদের জন্মভূমি। এই দেশ আমাদের কাছে স্বর্গ হইতেও অধিক আদরণীয়। প্রাচীন ও আধুনিক যুগের সাধু ও স্মরণীয়ের পুণ্যস্থতি ও কীর্তিকলাপে বিমণ্ডিত হইয়া এই দেশ প্রত্যেক বাঙ্গালীর নিকট তীর্থ স্বরূপ হইয়া রহিয়াছে।

বঙ্গদেশের নৈসর্গিক শোভা অতি আশ্চর্য্য ও রমণীয়। গিরিরাজ হিমালয় ইহার শিরের অল্পময় অলঙ্কার। অনন্ত নীলসমুদ্র এই ভূমির পাদপ্রক্ষালনে রত। গঙ্গা ও ব্রহ্মপুত্র নানা শাখাপ্রশাখায় বিভক্ত হইয়া পীযুষধারাদ্বানে সমগ্র বঙ্গভূমিকে সজ্জা, স্ফল্য ও শস্তাশ্রমলা করিয়াছে। এই স্বভাবসুন্দর দেশ অতীত কালের কত কীর্তি বক্ষে ধারণ করিয়া রাখিয়াছে তাহা ভাবিয়া দেখিলে আনন্দে ও বিশ্বাসে হৃদয় পূর্ণ হইয়া উঠে। বঙ্গদেশের প্রাচীন ও আধুনিক ইতিবৃত্তে অনেক স্থান হিন্দু, মুসলমান, ও বৌদ্ধগণের তীর্থরূপে প্রসিদ্ধি লাভ করিয়াছে।

Or,

Give the substance of *any one* of the following passages:—

(a) A great deal of discomfort arises from oversensitiveness about what people may say of you or your actions. Many unhappy persons seem to imagine that they are always in an amphitheatre with the assembled world as spectators ; whereas, all the while they are playing to empty benches. They fancy, too, that they form the particular theme of every passer-by. Well, but suppose that it is no fancy ; and that you really are the object of 'unmerited obloquy. What then? In that case the abuse does not touch you ; and if you are guiltless, it ought not to hurt your feelings any more than it was said of another person, with whom you are not even acquainted. You may answer that this false description of you is often believed in by those whose good opinion is of importance to your welfare. That certainly is a palpable injury. It is partly your own fault if the calumny is believed in by those who ought to know you and in whose affection you live.

(b) One of the great arts of escaping superfluous uneasiness is to free our minds from the habit of comparing our condition with that of others on whom the blessings of life are more bountifully bestowed, or with imaginary states of delight and security perhaps unattainable by mortals. Few are placed in a situation so gloomy and distressful as not to see every day beings yet more forlorn and miserable from whom they may learn to rejoice in their own lot. A native of England pinched with the frosts of December may lessen his affection for his own country by suffering his imagination to wander in the vales of Asia and sport among woods that are always green and streams that always murmur. But if he turns his thoughts towards the polar regions and considers the nations to whom a great portion of the year is darkness, and who are condemned to pass weeks and months amidst mountains of snow, he will soon recover his tranquillity, and, while he stirs his fire or throws his cloak about him reflect how much he owes to Providence that he is not placed in Greenland or Siberia.

2. Rewrite *any four* of the following sentences, substituting the verb form for the words italicized :—

6

- (a) I have an *engagement* to-day at four o'clock.
- (b) You have not acted according to *instructions*.
- (c) Whatever he gave, he gave *ungrudgingly*.
- (d) It is against my *inclination* to do anything dishonest.
- (e) He *successfully* strove to win the first prize.
- (f) The rain will give *fresh fertility* to the soil.

3. Tell in your own words the story contained in the following poem :—

15

A certain artist—I forget his name—  
 Had got for making spectacles a fame,  
 Or 'Helps to read'—as when they first were sold,  
 Was writ upon his glaring sign in gold.  
 There came a man into his shop one day ;  
 'Are you the spectacle-contriver, pray?'  
 'Yes, Sir,' said he ; 'I can in that affair  
 Contrive to please you, if you want a pair'.  
 'Can you? Pray, do then.' So at first he chose  
 To place a youngish pair upon his nose ;  
 And book produced, to see how they would fit—  
 Asked how he liked them. The man said, 'Not a bit'.

'Then, Sir, I fancy— if you please to try—  
 These in my hand will better suit your eye.  
 Still somewhat more they magnify the letter ;  
 Now, Sir?' 'Why now, I'm not a bit better.'  
 'No? Here take these that magnify still more ;  
 How do they fit?'—'Like all the rest before.'  
 'What sort of eyes can yours be, friend?' said, he,  
 'Why, very good ones, friend, as you may see.'  
 'Yes, I perceive the clearness of the ball :  
 Pray, let me ask you, can you read at all?'  
 'No, you great blockhead! if I could, what need  
 Of paying you for any "Helps to read"?'

4.

*Either,*

4

Show how the shifting of the accent in *any two* of the following words affects their meaning:—

Contract, desert, incense.

*Or,*

Substitute a single word for the words italicized in each of the following sentences:—

- (a) That word is *no longer in use*.
- (b) That herb is *fit to be eaten*.
- (c) He is *one who cannot according to the rules be elected*.
- (d) You are *liable to be called to account* for your actions.

5. Write essays on *any two* of the following subjects:—

50

- (a) Cottage Industries.
  - (b) The importance of method in the activity of life.
  - (c) The book you like best.
  - (d) The use and abuse of money.
  - (e) As you sow, so you reap.
  - (f) Public libraries.
  - (g) The power of the Press.
  - (h) The influence of Environment on the mental development of the child.
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## B. T. Examination,

1935

### PRINCIPLES OF EDUCATION

Examiners— { DR. SATYANANDA RAY, M.A., B.D., PH.D.  
MR. J. M. SEN, M.ED.(LEEDS), B.Sc.

#### FIRST PAPER.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Describe the anatomical and environmental conditions favourable for attention. In what respects does early attention differ from later? Is it necessary to make the lessons short and the illustrations varied in case of children?

2. What do you understand by 'Insight' and 'Trial and Error Learning'?

3. Discuss either Thorndike's 'Three Major Laws of Learning' or 'Minor Laws of Learning'. Are you familiar with any other laws of learning? If so, criticize Thorndike's laws in the light of the latter.

4. What is interest? What relation has it with attention? Is it possible to develop attention without any reference to interest? Illustrate your answer from your own observations or experimental evidence from the laboratory.

5. Discuss the mental experiences involved in perception, conception, imagination, and ideation. How do these contribute towards higher thought process?

6. Do you know of any case of children or adolescents who are never inhibited in their action by fear? Give examples of inhibitions from fear in a few school subjects and describe some of the remedies you have found useful in your own experience.

7. What are the conditions most favourable to a good memory? How is memory related to the laws of association?

8. Define suggestion and auto-suggestion. Describe concrete cases of suggestions offered by teachers for the good of their pupils. How far does a teacher's suggestion function?

9. In the Report on the Education of the Adolescent the members of the Committee state that 'there is a tide which begins to rise in the veins of youth at the age of eleven or twelve ; it is called by the name of adolescence'. What steps do you propose to take as a teacher to justify the following statement of the Committee—'If that tide can be taken at the flood, and a new voyage begun in the strength and along the flow of its current, we think that it will move on to fortune'?

## SECOND PAPER

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Discuss the 'Play Way in Education', and show how play is related to recreation and amusement.

2. What are the fundamental problems involved in the acquiring of skill in Arithmetic and Handwriting?

3. What are the conditions most favourable to a good memory? How is memory related to the laws of association?

4. Why are human instincts so difficult to classify? Do you think a thorough knowledge of instinctive acts will be helpful for teachers and guardians to deal effectively with their pupils and wards? Describe persons or pupils you know who have positive and negative self-feeling.

5. Discuss the nature of the sentiments and the constitution of a few of the complex emotions in life.

6. Justify or criticize the following statement made by Professor John MacMurray of London:—

'All true education is education in living and the emotional life is not simply one aspect of living, it is the core and essence of human life.'

7. Explain briefly the following expressions current in psychological literature:—

Age norms ; Intelligent quotient ; Individual difference ; Correlation ; Nonsense syllables ; Maze learning ; Mneme ; and Horne.

8. Describe briefly *any one* of the following tests:—

(a) The original Binet Tests or the Goddard or the Terman (Stanford) revision of Binet Tests.

(b) Otis Group Intelligence Tests.

Do you know of any Indian version of these tests? If so, describe one of them.

9. What do you understand by the expressions 'the nervous child', 'the problem child'? Can they be educated properly in schools meant for normal children? Why do educators advocate special schools for children who are below the average level of intelligence?



## THE CONTENTS AND METHODS OF TEACHING SELECTED SUBJECTS AND SCHOOL MANAGEMENT

Examiners— { DR. W. A. JENKINS, D.Sc., I.E.S.  
RAI SAHEB MANORANJAN MITRA, B.A., B.T.

### FIRST PAPER

*Select ANY THREE subjects.*

*The questions are of equal value.*

N.B.—*In all subjects diagrams, sketches, maps, and illustrations are to be given, wherever possible, as integral parts of the answers.*

### English

*Answer ANY TWO questions.*

1. 'We must not only talk well but listen well.' Explain this clearly and indicate its bearing on teaching and learning a language.
2. How would you adjust the claims of language and literature in the study of English in the schools of Bengal?

*Or,*

Give practical advice on:—

- (a) The teaching of Grammar, (b) The treatment of the typical errors of Bengali boys in their spelling and pronunciation of English words, (c) The teaching of Composition in Class VI, (d) The improvement of speed and comprehension in silent reading.
3. Give the titles of six English poems, with the names of their authors, suitable for Class VI of a high school. Give the substance and mode of treatment of one of the poems in class.

### Bengali

*Answer TWO questions only.*

1. How would you help boys to enrich their vocabulary, to acquire a good style and a permanent taste in the literature of the mother-tongue?
2. What is the scope of Grammar in the teaching of the mother-tongue in the primary stage of a high school? Suggest a syllabus of Grammar for the primary stage and a mode of teaching it.
3. What is the utility of learning poems by heart? Select six Bengali poems suitable for learning by heart by boys of Class VI. What principles guided you in the selection of the poems?

### History

*Answer TWO questions only.*

1. Explain clearly the principles underlying the syllabuses of history in the primary, middle, and high stages of a school.

Indicate the aims and the method of treatment of the subject in the different stages.

2. Discuss the view that a picture of the sequence of events in their broad outline is more important than minor details. Give the topics of a series of six lessons for Class X on the social and religious life and the general political condition of Bengal in the latter half of the 18th century.

3. Suggest six assignments according to the Dalton, Plan for Class VIII on—

‘The Rise and Fall of the Pathan Empire.’

Or,

‘The Rise and Decay of the Maratha Power.’

## Geography

*Answer TWO questions only.*

1. Geography may be defined as the study of man in his relations to the earth. Explain this statement clearly and suggest a course of study on India for the middle classes of a high school based on the above conception of Geography. Indicate how this view affects the teaching of Geography.

2. Write full notes of a lesson on—

‘The Airways between India and Europe.’

Or,

‘The Mediterranean Flora.’

Or,

‘Irrigation in India.’

3. Select at least two topics from the syllabus of Geography and indicate the scope and plan of out-door practical work which may be done by boys of Class VIII who may be asked to study the topics.

## Mathematics

*Answer TWO questions only.*

1. Discuss the relative importance of oral and written work in Arithmetic. Prepare a scheme of lessons on—

‘Decimalization of money.’

Or,

‘Subhankari—Sherkasha—mankasha.’

2. Discuss the scope and utility of practical demonstration of geometrical theorems. State the geometrical theorems corresponding to the following algebraical identities:—

$$(i) \quad k(a + b + c) = ka + kb + kc.$$

$$(ii) \quad a^2 - b^2 = (a + b)(a - b).$$

Indicate the method of treatment of one of the theorems.

3. Discuss the place of graphs in school mathematics. Prepare a scheme of work on graphs and indicate the mode of treatment.

## Classical Languages Group

*Answer TWO questions only.*

1. Write a connected narrative to illustrate—

(a) the conjugation of verbs, and

(b) the sequence of tenses, in Sanskrit.

Shew how you will explain these to your pupils, drawing your illustrations from your story.

2. 'Sanskrit is said to be a fully inflectional language.' Prepare a lesson to fix this in your pupils' minds, giving illustrations in Sanskrit, with the parallel columns in English.

3. (a) Discuss the desirability of teaching Sanskrit by the *Direct Method*, and (b) Sketch a first lesson in Sanskrit by the *Direct Method*.

## Science

*Answer TWO questions only.*

1. Write a short note on the Heuristic Method. Discuss, giving illustrations, how far it is possible to use it in the teaching of science in a high school.

2. Suggest a series of lessons, giving diagrams of the apparatus required, on—

'The Formation of Images by mirrors and lenses.'

*Or,*

'Expansion of solids and liquids.'

3. Describe a simple chemical experiment, involving measurement of volume and weight, which you can expect boys of Class VIII to perform under your guidance. Indicate the directions you should give to the class and the nature of the record in the laboratory book.

## Nature Study

*Answer TWO questions only.*

1. State clearly the broad divisions of work which 'Nature Study' includes.

Write a short note on the keeping of Nature calendars and diaries. Reproduce a specimen page from your 'Nature Diary'.

2. Prepare a scheme of lessons for the study of the 'Bee' or the 'Ant'. Give details of the first lesson.

3. What is the relation of Nature Study to Science? Plan a course of observation lessons on some plants of your neighbourhood, a knowledge of which may be useful in the later study of systematic Botany. Give an account of the First day's work.

## Hygiene

*Answer TWO questions only.*

1. Describe the Respiratory System.

*Or,*

The Nervous System.

Show what practical application a teacher can make of his knowledge of the subject.

2. What are the nutritive principles of food and their chief functions? What are the common adulterants of milk, ghee, and mustard oil?

*Or,*

What are the defects of an ordinary Bengali diet? Suggest a balanced diet for pupils of the age of fifteen.

3. What are the evil effects of bad ventilation, unsuitable benches, defective distribution of light.

Calculate the amount of floor space per head that should be allowed in a class room and that of the cubical space in a dormitory.

4. In the teaching of Hygiene in Class IV, mention and illustrate fully the means you would use in class to make the subject of practical value. What out of class activities would you add if the school were a boarding school?

### Primary School Subjects

*Answer TWO questions only.*

1. Give an idea of the amount of stagnation and wastage in the primary schools of Bengal. What are the causes? Suggest remedies, showing clearly the teacher's responsibility in the matter.

2. Discuss the relative importance of the different subjects of the primary curriculum, and suggest a plan for the ruralization of primary school work.

3. Give a short account of the development of the primary school system in Bengal, and discuss the place of the primary school in the national life of Bengal.

*Or,*

Discuss the following statement in all its implications: 'An improvement in quality rather than quantity is the first requisite of an effective system of primary education in Bengal'.

### The Kindergarten System

*Attempt ANY TWO questions only.*

1. Plan one week's practical course of work which may be done with a child of four years living in a village home.

2. Name half a dozen handwork occupations which may be done in a Kindergarten class consisting of children of six years. State the aims and the manner of teaching the occupations.

3. State the principles underlying Froebel's gifts, and describe the uses of any two gifts.

### SECOND PAPER

*The questions are of equal value.*

*Attempt FIVE questions only.*

*Only lady candidates should attempt Question 9.*

1. Describe how far in practice in Bengal a Headmaster or a Headmistress of a High School controls or influences (a) Admissions, (b) Promotions, (c) Discipline, (d) Appointments. What changes would you like to see?

2. What do you consider should be the functions of a School Committee? How far do you consider that School Committees exceed or do not exercise the authority which, in your opinion, should be theirs?

3. Assuming that a Headmaster has decided to inaugurate a new system of teaching—say a modified Dalton Plan—what steps do you consider that he should take to guarantee that it has a fair trial?

4. School Libraries in Bengal are at present almost useless. Comment on the above and indicate how you would improve their utility.

5. Write a short essay on School Clinics and indicate any directions in which you think that in Bengal the responsibility of the School authorities for the physical welfare of scholars could be more adequately discharged.

6. What are the advantages and disadvantages of staffing a school with specialist teachers who move about from class to class to teach their individual subjects? How can you eradicate some of the disadvantages?

7. Is control by an Inspectorate desirable in Bengal, and, if so, what do you consider should be the work of an Inspector? Assuming that local control and teaching have reached a reasonable state of efficiency are there any useful functions which a provincially organized Inspectorate can perform?

8. Write a short essay on one of the following subjects:—

- (a) Co-operation between parents and teachers.
- (b) The use and abuse of text-books.
- (c) My ideal High School.

The essay should be written from the point of view of a Bengal educationist.

9. How far do you consider it desirable to differentiate the curriculum for boys and girls in High Schools?

## HISTORY OF EDUCATION

*Examiner*—MR. KSHETRAPAL DASGHOSH, B.A.(CAL.), B.A.(OXON).

*The questions are of equal value.*

*Only six questions are to be attempted. Four should be selected from Group I and two from Group II.*

### GROUP I.

1. 'Each man is born a debtor.' Explain the theory of 'debt' in the religious and educational life of ancient India. How were the individual's obligations discharged? Do you find any corresponding principle in modern educational theory and practice?

2. What provisions were made for the education of the Mahomedan child in mediaeval India? How do they differ from the arrangements of the present day?

3. 'A beautiful mind in a beautiful body.' What was the Athenian programme for realizing this? How far are the Greek educational ideals influencing our present-day educational theory and practice?

4. 'Comenius determined nearly three hundred years ago, with an exactness that leaves nothing to be desired, the division of the different grades of instruction.' What is Comenius' conception of the aims, courses of study, and methods of teaching, in the various grades of instruction? What has modern Indian educational organization to learn from his ideas in this respect?

5. 'Herbert Spencer is only Jean Jacques Rousseau with a scientific bias.' Discuss. How far have Rousseau and Spencer's ideas affected modern educational practice?

6. Write notes on *any two* of the following :—

- (a) Homer Lane's Little Commonwealth.
- (b) The Perse School, Cambridge.
- (c) The Calcutta Blind School.
- (d) The Borstal School at Alipore.

#### GROUP II.

7. 'The Act of 1918 constitutes the most important single progressive step ever taken in English educational history.' Discuss. Estimate briefly the broad achievements under the Act and the forces that are militating against its full execution.

8. 'Since the War, much has been written both for and against the English Public School system.' What have been its strong and weak points? Do you know of the newer developments in the English Public Schools to meet criticisms? Show how the proposed Indian Public School would differ from the typical English Public School.

9. 'The contribution of the United States of America to the solution of the problem of organizing a democratic system of secondary education is obvious.' Elucidate this with reference to the aims, functions, and courses of study of the American Public School. How does India compare with America in this matter?

10. 'Adult Education is a province in which England and Wales are creating an enviable record.' Sketch briefly the development and present-day organization of the Adult Education Movement in England. Do you know of any activities in this country in regard to this movement?

11. 'The wastage in primary education in India, especially in Bengal, is appalling.' Discuss. What are the causes of this wastage? What remedies do you suggest?

12. 'It is difficult for the University of Calcutta to efficiently control, direct, and inspire secondary education in Bengal. The creation of a Board of Secondary Education is an urgent educational need.' Show the defects of the present system of control and direction of secondary education, and give your own scheme for the constitution, functions, and powers of the proposed Board.

### ENGLISH COMPOSITION (INCLUDING ESSAY)

*Examiner—MR. A. K. CHANDA, M.A. (OXON).*

*The figures in the margin indicate full marks.*

1. Write an essay on *one* of the following subjects :—

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- (i) The place of religious education in the school curriculum.
- (ii) The Primary School in Bengal.
- (iii) The problem of the adolescent youth.
- (iv) The teaching of English in Indian Schools.
- (v) Class room teaching and the backward child.
- (vi) On Leisure.

2. Rewrite in your own words *two* of the following extracts, expanding, if necessary, to make the sense clear:— 30

(a) It is a perpetual heresy of English culture to believe that only the first-order mind, the Genius, the Great Man, matters ; that he is solitary, and produced best in the least favourable environment, perhaps the Public School ; and that it is most likely a sign of inferiority that Paris can show so many minds of the Second Order. If too much bad verse is published in London, it does not occur to us to raise our standards, to do anything to educate the poetasters ; the remedy is kill them off.

(b) I despair of giving any idea of that glacial blast : it was as if one stood deprived of clothing, of skin and flesh—a jabbering anatomy—upon some drear Caucasian pinnacle. And I thought upon the gentle rains of London, from which I had fled to these sunny regions, I remembered the fogs, moist and warm and caressing : greatly is the English winter maligned !

(c) I adore all acting, all masks and subterfuges, all cloaks and garbs of respectability, the obsequiousness of head waiters and the civility of underlings, all rogues and vagabonds soever, the leer of the pavement and the wit of the gutter. . . . 'I love the mystery and peril of the streets. . . . I love to lie and think of the world as my own, my very own, in which, though I earn a living by rule and in tune with the common whim, I may by the grace of God think what I like and choose the friends who shall make me laugh and the books which shall make me cry.

3. Bring out clearly the idea of *one* of the following :—

20

(a) Lady, when your lovely head  
Sinks to lie among the Dead,  
And the quiet Places keep  
You that so divinely sleep :  
Then the Dead shall blessed be  
With a New Solemnity.  
For such beauty so descending  
Pledges them that death is ending.  
Sleep your fill :—But when you wake  
Dawn shall over Lethe break.

(b) Very old are we men ;  
Our dreams are tales  
Told in dim Eden  
By Eve's nightingales ;  
We wake and whisper awhile,  
But, the day gone by,  
Silence and sleep like fields  
Of amaranth lie.

(c) Yonder a maid and her wight  
Come whispering by ;  
War's annals will cloud into night  
Ere their story die.

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# **T. T. Examination,**

**September, 1935.**

## **FIRST PAPER**

### **GENERAL PRINCIPLES OF EDUCATION**

*Examiner—Mr. A. N. BASU, M.ED. (LOND.).*

*Full Marks—50*

*Time—Two hours*

*The questions are of equal value.*

*Attempt ANY THREE questions.*

1. 'The school is a society.' Develop this idea, and discuss how this principle can be carried into effect in actual school practice.
  2. Discuss the value of suggestion in education.
  3. 'Interest is the first step to learning.' Discuss this statement, and describe from your own experience some of the methods which may be used to create interest in the classroom.
  4. What are the fundamental principles of discipline? Classify the main faults from which bad discipline results in the classroom with your comments thereon.
  5. What do you understand by self-government among pupils? Consider its possible working in Indian schools and its advantages and limitations.
  6. How should a lesson be prepared? Mention the chief points, drawing upon your own experience.
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## **SECOND PAPER**

### **EDUCATIONAL PSYCHOLOGY**

*Examiner—MR. H. P. MAITI, M.A.*

*Full Marks—50*

*Time—Two hours*

*The questions are of equal value.*

*Attempt ANY FOUR questions.*

1. Discuss the importance of educational Psychology in a Teachers' training course.



2. What are the consequences of the failure of the School to stimulate and guide the social tendencies of the child? How should these be done?
3. Give a short account of Mental Tests and their uses.
4. Point out the different possible uses of Imitation within the School. Show how curiosity may be misused by the teacher.
5. Analyze memory, and make a list of rules of efficient memorization.
6. What are the different methods of human learning? State Thorndike's laws of learning.
7. How are Heredity and Environment related? Point out the bearing of this relation on education.
8. Write short notes on :—  
 (a) Formal discipline, (b) Correlation, (c) 'Problem' children.

### THIRD PAPER

### EDUCATION IN BENGAL

*Examiner* -MR. J. M. SEX, M.ED.(L.A.E.DS), B.Sc.

*Full Marks*—50

*Time*—Two hours

*The questions are of equal value.*

*Attempt ANY FOUR questions.*

1. In what respects is it true that the people of Bengal are indebted to Lord Macaulay for the growth and development of modern learning? Discuss the question with reference to the controversies between the Eastern and Western scholars of Macaulay's time.
2. Who were the authors of the Education Despatches of 1854 and 1859? What was the policy enunciated by them with regard to primary education?
3. State briefly some of the difficulties that Secondary Education movement in Bengal has to confront. Examine these critically, and suggest the best way out of them.
4. State the reasons put forward by those who were opposed to the Elementary Education Bill introduced in 1911 into the Imperial Legislative Council by the late Mr. G. K. Gokhale. Criticize their points of view in the light of present day tendencies in education in Bengal.
5. What powers have been given to the University of Calcutta by the Indian Universities Act of 1904 regarding control over the secondary schools in Bengal? Do you advocate any change in them?
6. Discuss briefly the problems of (i) the cost of primary education, (ii) the pay of teachers, and (iii) the wastage in primary schools.

# FOURTH PAPER

## METHOD OF TEACHING SELECTED SUBJECTS.

*Time—Four hours*

*Select ANY TWO subjects.*

**(English)**

*Examiner—MR. H. Z. A. KABIR, M.A., B.A.(Oxon).*

*Full Marks—50*

*Answer Question 1 and TWO other questions.*

1. Write short notes on *any two* of the following :— 20
  - (a) Direct method and its mode of application.
  - (b) Usual errors in spelling and pronunciation of English words and how to correct them.
  - (c) Teaching of grammar in the junior stages.
  - (d) Uses and abuses of translation.
  - (e) Improvement of quality and speed of handwriting.
  - (f) Relative importance of loud and silent reading.
2. What are the special difficulties of the teaching of English in India? Can you suggest means of overcoming them? 15
3. How does the teaching of the vernacular help or hinder the teaching of English? How would you overcome the difficulties created by bilingualism? 15
4. Discuss the aims of teaching English as defined in our syllabus. What is the most suitable method for attaining those ends? 15
5. Supply a title to *one* of the following poems, and prepare full teaching notes for the class for which you think the poem best suited :— 15
  - (a) He that is down, need fear no fall,  
       He that is low, no pride ;  
   He that is humble ever shall  
       Have God to be his guide.  
   I am content with what I have,  
       Be it little or much ;  
   And, Lord, contentment still I crave.     ...  
       Because Thou savest such.
  - (b) The moon comes every night to peep  
   Through the window where I lie ;  
   But I pretend to be asleep,  
   And I watch the moon go slowly by.  
   And she never makes a sound.  
   She stands and stares ! And then she goes  
   To the house that's next to me,  
   Stealing by on tippy-notes,  
   To peep at folk asleep may be.  
   And she never makes a sound.
  - (c) Here's an example from a butterfly,  
   That on a rough, hard rock happy can lie,  
       Friendless and all alone  
       On this unsweetened stone.

Now let my bed be hard, no care take I  
 I'll make my joy like this small butterfly,  
 Whose happy heart has power  
 To make a stone a flower.

**(Bengali)**

*Examiner*—MR. P. K. SEN, M.A.

*Full Marks*—50.

*The questions are of equal value.*

*Answer ANY THREE of the following.*

1. Point out the difference between *sādhubhāshā* and *kathajabluṣhā* with examples of both, and express your preference for one of them.
2. Discuss the ways in which poetry should be taught, specially to the younger pupils.
3. 'The teacher should be careful to preserve a sense of proportion. He should avoid obsolete and burdensome pedantries, the multiplication of arbitrary rules, and teaching of niceties and subtleties that are beyond his pupils' comprehension or of no practical use to them.'
- How far are these cautions applicable to the teaching of Bengali grammar in the lower classes of a High English School?
4. Why is essay-writing considered to be an important item in the school curriculum? What steps are necessary to teach essay-writing in the higher classes?
5. Should students be encouraged to prepare their own selections in prose and verse? If so, how far may such a habit contribute to their general development and efficiency in the class?

**(Mathematics)**

*Examiner*—DR. S. M. GANGULI, D.Sc.

*Full Marks*—50.

*Attempt THREE questions only. Each question carries SIXTEEN marks. TWO marks reserved for special excellence and neatness.*

1. What are the principal aims of teaching Mathematics in a general education?  
 Discuss how mathematical learning is useful in modern times.
2. Illustrate by simple examples to show that the notion of algebraic equations can be introduced even in the elementary stage of teaching Arithmetic.  
 Substantiate the statement that Algebra may be regarded as the generalized arithmetic.
3. Explain by means of illustrative examples the application of Arithmetic and Algebra to Geometry.
4. Describe the process of plotting a graph, and discuss its use in Algebra.  
 Give an illustration to show how graphic method can be used in solving an algebraic equation.

5. What are the defects in Euclid's system of Geometry?

Summarize the points that you should impress upon your pupils with regard to the method of attacking a geometrical proposition.

6. Explain the trial method of finding the factors of a quadratic expression.

Exhibit by means of an illustration the different stages in the process of solution of an algebraic problem.

### (History)

*Examiner*—MR. N. K. SINHA, M.A.

*Full Marks*—50.

*The questions are of equal value.*

*Answer ANY THREE.*

1. What are the aims of history instruction?
2. How can history be best graded in our schools?
3. What are the limitations of the biographical treatment of history? What are its merits?
4. How can you invest the past with an air of reality with the aid of maps, charts, diagrams, portraits, plans, and other special devices?
5. 'The teacher teaches, the text book summarizes or elaborates, refreshes the memory, fixes names and dates, and in general helps the pupil to keep his bearings.' Explain clearly the part of the teacher and the text book in imparting a history lesson.
6. 'The text book is but half the apparatus.' Explain: how far original sources can be used in our schools as giving atmosphere and as exercises.

### (Geography)

*Examiner*—MR. A. N. BASU, M.ED.(LOND.)

*Full Marks*—50.

*The figures in the margin indicate full marks.*

*Only THREE questions are to be answered.*

*Attempt Question 1 and ANY TWO of the rest.*

1. Draw a sketch map of India, and show the main natural regions, the important drainage systems, and the wettest areas. What is excessive rainfall due to in these areas? 20

*Or,*

Draw a sketch map of Ceylon, showing the main natural divisions, the important seaports, and the trade-routes which connect the island with other parts of the world.

2. Write an essay on geographical excursion. 15
3. Discuss the use and abuse of material aids in the teaching of Geography. 15
4. 'The most essential thing in Geography teaching is to make it real.' Discuss this statement fully. 15

5. Select *any one* of the following topics, and write detailed notes of the first lesson :— 15

- (a) The south-west monsoon ; for Class VI.
- (b) The main agricultural products of Bengal ; for Class V.
- (c) Earthquakes ; for Class VII.
- (d) Mediterranean lands of the world ; for Class VIII.
- (e) The Ocean Currents ; for Class IX.

### (Science)

*Full Marks—50.*

*The questions are of equal value.*

*Answers to each half should be written in separate books.*

Two questions are to be attempted from each half, of which Question 1 is compulsory.

#### FIRST HALF.

*Examiner—*PROF. P. N. GHOSH, PH.D., D.Sc., F.INST.P.

1. Write a note on the introduction of teaching Physics, Chemistry, and Geology in a school, keeping in view its relation with other scientific subjects.

2. How would you explain to your students the effect of the atmospheric pressure and the various natural phenomena arising out of it? Describe suitable experimental devices required for the purposes of explanation.

3. What is the characteristic property of a simple glass lens? State the different purposes to which the lens may be used in a class for explaining optical phenomena.

4. State clearly simple devices to illustrate the heating, illuminating, and chemical effects of electric current to your students.

#### SECOND HALF.

*Examiner—*PROF. H. K. MOOKERJEE, D.Sc., D.I.C. (LOND.).

1. How would you explain to your students the interdependency of plants and animals?

2. How would you describe to your pupil the flowering-shoot of a pea-plant? What is the utility of the leaves?

3. Suppose you are asked to teach the life-history of *either* Ant or Frog. How would you prepare your notes?

4. Heart is the pumping agent for circulation in man. How would you demonstrate it with a diagrammatic figure?

# Diploma of Spoken English,

December, 1935.

## WRITTEN PAPER

Candidates must answer question No. 1 ; any THREE questions from Nos. 2—6 ; and any TWO questions from Nos. 7—10. Question 1 carries 20 marks, the others 16 each.

1. Transcribe the following passage in the International Phonetic Script, marking the position of the stresses, and reproducing the "Standard English" pronunciation as far as possible.

"With regard to the advance of democracy, there are two different positions which it is possible for a rational person to take up, according as he thinks the masses prepared, or unprepared, to exercise the control which they are acquiring over their destiny, in a manner which would be an improvement upon what now exists. If he thinks them prepared, he will aid the democratic movement ; or if he deems it to be proceeding fast enough without him, he will at all events refrain from resisting it."

2. Explain the structure of the larynx, and its function in the following sounds ; coughing, glottal stop, aspirates, voiced sounds.

3. Classify any four of the following sounds and explain fully how they are formed, with mouth diagrams if necessary.

[ y d, j ʒ ð ʁ ɳ ]

4. What are the main principles of vowel classification? Explain the theory of cardinal vowels.

5. Draw a "vowel diagram" to indicate the formation of the diphthongs contained in the following words ; play, fly, plough, there, fear, poor. Represent in Bengali characters such of them as occur in Bengali.

6. Give three instances of Assimilation in English, and explain the process in each case.

Give the weak and strong forms of the following words ; the, that, am, they.

7. Discuss the nature of the English stress system.

Give some instances of words with double stress, and with primary and secondary stress.

8. Illustrate the principal types of sentence intonation in English.

9. Criticise phonetically the following Bengali transcriptions of English Words. Chair = চেয়ার, Globe Nursery = গ্লোব নার্সারী, Royal = রয়েল, Wales = ওয়েলস, Decree = ডিক্রী, Wood = উড।

10. Indicate some of the common defects in the English spoken by Bengalis, and suggest how they might be cured.

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# M. A. Examination,

1935

## ENGLISH

### FIRST PAPER

#### FIRST HALF.

Examiner—MR. SEHASCHANDRA RAY, M.A.

*The figures in the margin indicate full marks.*

#### GROUP A

*Answer TWO questions only.*

1. Characterize and illustrate the Anglo-Saxon attitude to Nature, as revealed through Old English Poetry. 10

2. Give a brief account of the poetry of Cynewulf, and compare it with earlier Christian poetry. 10

3. Compare Langland with Chaucer as representative poets of their age, and bring out the former's conservatism. 10

4. Write critical and historical notes on *any two* of the following:— 10

*The Wanderer, The Anglo-Saxon Chronicle, The Battle of Maldon, Historia Regum Britanniae, Chery Chase, Sir Gawain and the Knight.*

#### GROUP B

*(For 'A' Group students only.)*

*Answer ANY TWO questions.*

1. In what respects does the Teutonic branch differ from the other branches of the Indo-European family? Give a detailed account of *any one* of the principal peculiarities of the Teutonic languages. 15

2. Trace the rise of standard literary English. 15

*Or,*

Write a note on the Latin element in English.

3. 'Analogy has been a particularly powerful force in English.' Explain and illustrate. 15

*Or,*

Give a brief historical account of the declension of English nouns, with special reference to the irregular plurals.

4. Write philological notes on *any five* of the following:— 15  
*English, forlorn, gossip, nickname, children, vixen, nearer, its, ought, needs.*

## GROUP C

(For 'B' Group students only.)

Answer ANY TWO questions.

1. 'The basis of morality is laid not by preachers, but by poets.'  
Elucidate. 15
2. Write a note on the Essay as a distinct type of literature. 15
3. 'Art grows out of life; it is fed by life; it reacts upon life.'  
Discuss. 15
4. Lyric poetry has been described as 'the quintessence of momentary mood garnered into words'. Examine the above statement, and describe what you think to be the essential elements of lyric poetry. 15

## SECOND HALF.

Examiner—DR. H. C. MOOKERJEE, M.A., PH.D.

*The questions are of equal value.*

Answer ANY THREE questions.

1. Discuss the nature of the foreign elements that went to the composition of early Elizabethan drama.
2. Trace the evolution of the novel in the 18th century. Can you specify the part played in it by the stories appearing from time to time in periodicals like the *Tatler* and the *Spectator*?
3. The 18th century has been called 'the age of prose and reason'? How far is this true of its poetic compositions?
4. Write a short note on the Pre-Raphaelite poets, and bring out their affiliations with the poets of the Romantic Revival.
5. Give a brief review of modern English drama, and compare its technique and characterization with those of the Shakespearean drama.
6. Give a short account of the nineteenth century reviewers, and compare their work with that of the Romantic critics.
7. Give a critical estimate of the work of one of the following writers :—  
Lyly, Dryden, Burns, Matthew Arnold, H. G. Wells.

## SECOND PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF.

Examiner—MR. PRAFULLACHANDRA GHOSH, M.A.

1. Write a note on one of the following :— 15
  - (a) Shakespeare's handling of his source in *Antony and Cleopatra*.
  - (b) Shakespeare's use of Soliloquy as a dramatic device in general, with special reference to the soliloquies of Iago.
  - (c) The character of Cleopatra in Shakespeare's and in Dryden's play



2. *Either,* 15  
Examine how far the following estimates tally with your impression :—

- (a) A maiden never bold ;  
Of spirit so still and quiet, that her motion  
Blush'd at herself.
- (b) In her youth  
There is a prone and speechless dialect,  
Such as move men ; beside, she hath prosperous art  
When she will play with reason and discourse,  
And well she can persuade.

*Or,*

Write a critical note on the dramatic interest of *one* of the following :— 15

- (a) The first meeting of Dolabella and Cleopatra in  
Shakespeare's play and in Dryden's.  
(b) The scene of Othello's arrival in Cyprus.  
(c) The prison scenes in *Measure for Measure*.

*Or,*

Analyze *one* of the following, with special reference to the  
characterization of the chief actors :— 15

- (a) The scene in which Isabella first comes before Angelo to plead  
for her brother's life.  
(b) The scene in which Antony and Cæsar are reconciled after the  
former's arrival at Rome from Alexandria.
3. Annotate the following passages with reference to the context, and  
bring out in each case the mood of the speaker :— 20

- (a) He's in for a commodity of brown paper and old ginger, nine-  
score and seventeen pounds, of which he made five marks ready money ;  
marry, then ginger was not much in request, for the old women were all  
dead.

(Clearly explain the transaction hinted at.)

*Or,*

But man, proud man,  
Drest in a little brief authority  
Most ignorant of what he is most assured,  
His glassy essence, like an angry ape,  
Plays such fantastic tricks before high heaven  
As make the angels weep ; who, with our spleens,  
Would all themselves laugh mortal.

- (b) Villany ! villany ! villany !  
*I think upon 't, I think, I smell 't ; O villany !*  
*I thought so then ; I'll kill myself for grief.*  
O ! villany, villany !

(Clearly bring out the thoughts troubling the speaker of these lines,  
which are hinted at in the expressions in italics.)

*Or,*

O ! beware, my lord, of jealousy ;  
It is the green-ey'd monster which doth mock  
The meat it feeds on.

(Discuss the reading 'make' for 'mock' in line 2.)

- (c) Such as I am, I come from Antony:  
 I was of late as petty to his ends  
 As is the morn-dew on the myrtle-leaf  
 To his grand sea.

(Discuss the readings 'his grand sea', 'this grand sea', 'its grand sea'.)

Or,

And it is great  
 To do that thing that ends all other deeds,  
 Which shackles accidents, and bolts up change,  
 Which sleeps, and never palates more the dug,  
 The beggar's nurse and Cæsar's.

(Discuss the reading 'dug' for 'dug' in line 4.)

- (d) Her tongue will not obey her heart, nor can  
 Her heart obey her tongue; the swan's down-feather  
 That stands upon the swell at full of tide,  
 And neither way inclines.

Or,

Thou hast nor youth nor age;  
 But, as it were, an after-dinner's sleep,  
 Dreaming on both; for all thy blessed youth  
 Becomes as aged, and doth beg the alms  
 Of palsied eld.

## SECOND HALF.

Examiner—MR. J. L. BANERJEE, M.A., B.L.

1. 20  
 Either,

Show from a brief analysis of the plot how it can be said that the *Alchemist* faithfully and accurately reflects the Jacobean London in which Ben Jonson lived.

Or,

Write brief and explanatory notes on the following:—

- (a) Jonson puts the case for alchemy as fairly and plausibly as could any professor of that art.
- (b) The *Alchemist* may be regarded as one of the most perfect specimens of plot-construction in Literature.
- (c) 'The only person in the play possessed of a scruple of honesty is discomfited while the greatest scoundrel of all is approved in the end and rewarded.'

2. Explain four of the following passages, adding critical and illustrative notes as may be necessary:— 10

- (a) May don Provost ride a feasting long,  
 In his old velvet jerkin and stain'd scarfe,  
 My noble sovereign, and worthy general,  
 Ere we contribute a new crewel garter  
 To his most worsted worship.
- (b) He is no chiaus.
- (c) The aqueity,  
 Terreity, and sulphureity  
 Shall run together again, and all be annulled,  
 Thou wilted Ananias.

(d) A learned elder, one of Scotland,  
 Assured me; *aurum potabile* being  
 The only med'cine, for the civil magistrate,  
 T' incline him to a feeling of the cause ;  
 And must be daily used in the disease.

(e) I put myself  
 On you, that are my country.

3. Explain one of the following passages :—

20

(a) Good morning to the day; and next, my gold!  
 Hail the world's soul and mine! more glad than is  
 The teeming earth to see the long'd-for sun  
 Peep through the horns of the celestial Ram,  
 And I, to view thy splendour darkening his;  
 That, lying here, amongs my other hoards,  
 Shew'st like a flame by night, or like the day  
 Struck out of chaos, when all darkness fled  
 Unto the centre. O thou son of Sol,  
 But brighter than thy father, let me kiss,  
 With adoration, thee, and every relick  
 Of sacred treasure in this blessed room.  
 Well did wise poets, by thy glorious name,  
 Title that age which they would have the best;  
 Thou being the best of things, and far transcending  
 All style of joy, in children, parents, friends,  
 Or any other waking dream on earth:  
 Thy looks when they to Venus did ascribe,  
 They should have given her twenty thousand Cupids;  
 Such are thy beauties and our loves! Dear saint,  
 Riches, the dumb god, that giv'st all men tongues,  
 Thou canst do nought, and yet mak'st men do all things;  
 The price of souls; even hell, with thee to boot,  
 Is made worth heaven.

(b) This royal throne of kings, this sceptred isle,  
 This earth of majesty, this seat of Mars,  
 This other Eden, this demi-paradise;  
 This fortress built by Nature for herself  
 Against infestation and the hand of war,  
 This happy breed of men, this little world;  
 This precious stone set in the silver sea,  
 Which serves it in the office of a wall  
 Or as a moat defensive to a house,  
 Against the envy of less happier lands;  
 This blessed plot, this earth, this realm, this England,  
 This nurse, this teeming womb of royal kings,  
 Renowned for their deeds as far from home  
 As is the sepulchre in stubborn Jewry  
 Of the world's ransom, blessed Mary's son:  
 This land of such dear souls, this dear, dear land,  
 Is now leased-out—I die pronouncing it—  
 Like a tenement, or pelting farm.

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## THIRD PAPER.

*The figures in the margin indicate full marks.*

## FIRST HALF.

*Examiner*—MR. RABINDRANARAYAN GHOSH, M.A.

1. What indications do you find in Chaucer's Prologue to the Canterbury Tales of his modernness of outlook and temper? 16

*Or,*

Do you think the under-current of satire to be deeper and more pronounced in Chaucer's portrayal of characters connected with the church? Discuss this view with reference to his treatment of the other characters in the Prologue.

2. Indicate the distinctive character of the devotional poetry of Crashaw, and contrast it with that of Vaughan and Herbert. 16

*Or,*

'Seventeenth century verse is by no means merely a legacy from the Renaissance and a prediction and presentiment of the age of common-sense. Amplify and discuss the above remark.

3. Annotate *three* of the following passages, with appropriate critical comments, taking *one* from *each* group:— 16

## GROUP A.

- (a) 'Purs is the erchedeknes helle,' seyde he.  
But wel I woot he lyed right in dede;  
Of cursing oghte ech gilty man han drede—  
For curs wol slee, right as assoilling saveth.
- (b) There is in God (some say)  
A deep but dazzling darkness; As men here  
Say it is late and dusky, because they  
See not all clear;  
(O for that night! where I in him  
Might live invisible and dim.

## GROUP B.

- (c) Even in pleasure pleased  
Unworthily, disliking here, and there  
Liking; by rules of mimic art transferred  
To things above all art . . . . giving way  
To a comparison of scene with scene,  
Bent over-much on superficial things,  
Pampering myself with meagre novelties,  
Of colour and proportion.
- (d) He holds on firmly to some thread of life—  
(It is the life to lead perforcedly)  
Which runs across some vast distracting orb  
Of glory on either side that meagre thread,  
Which, conscious of, he must not enter yet—  
The spiritual life around the earthly life!

## GROUP C.

- (e) Milton's strong opinion now not heav'n can bound,  
Now serpent-like in prose he sweeps the ground,  
In quibbles angel and arch-angel join,  
And God the father turns a school-divine.
- (f) Yet then did Gildon draw his venal quill;  
I wished the man a dinner and sat still.  
Yet then did Dennis rave in furious fret;  
I never answered, I was not in debt.  
If want provoked, or madness made them print,  
I waged no war with Bedlam or the Mint.

## SECOND HALF.

Examiner—DR. SRIKUMAR BANERJEE, M.A., PH.D.

4. Give some examples of Wordsworth's early communion with Nature, indicating clearly the influence of such communion in each case and its exact bearing upon the development of his final attitude towards Nature. 16

Or,

Summarize Wordsworth's impressions of Cambridge and London, showing how far they retarded or helped his imaginative development. Can you trace any indications of inadequacy or one-sidedness in these impressions?

5. Estimate, with reference to the following poems, the extent of Browning's success in the presentation of complex types of character:— 16

*Cleon; Bishop Blougram's Apology; Andrea del Sarto.*

Or,

Illustrate from *Men and Women* the distinctive features of the dramatic monologue as a form of literary art. What light does Browning's preference for this form throw on the nature of his poetic genius?

6. Elucidate one of the following passages, and attempt a critical appreciation of its thought and style:— 20

- (a) We leave the intricate earth. White butterflies  
Blundering low over the wind-tossed vetch,  
The road, the dust, the wind-mill, all are touched  
With a simplicity of coming strangeness.  
For there, across the dunes (take in your breath).  
Under the dove-grey sky—as wide as death—  
The sea.  
Fall, fall away, all soot and dust; despair,  
Turmoil and broil, uncertainties that rend,  
All grinding noise and pain be ever still;  
Here is the end—  
Unmeasured sands to walk as spirits may  
With washed, unweighing feet, for ever free—  
The hush of waves, almost unreachable  
By mortal sense, as is Eternity.

Or,

- (b) Within the soul a faculty abides,  
That with interpositions, which would hide  
And darken, so can deal that they become  
Contingencies of pomp; and serve to exalt  
Her native brightness. As the ample moon,

In the deep stillness of a summer even,  
 Rising behind a thick and lofty grove,  
 Burns, like an unconsuming fire of light,  
 In the green trees ; and, kindling on all sides,  
 Their leafy umbrage, turns the dusky veil  
 Into a substance glorious as her own,  
 Yea, with her own incorporated, by power  
 Capacious and serene. Like power abides  
 In man's celestial spirit ; virtue thus  
 Sets forth and magnifies herself ; thus feeds  
 A calm, a beautiful, and silent fire,  
 From the encumbrances of mortal life,  
 From error, disappointment—nay, from guilt ;  
 And sometimes, so relenting justice wills,  
 From palpable oppressions of despair.

## FOURTH PAPER\*

The figures in the margin indicate full marks.

## FIRST HALF.

Examiner—MR. RAJANIKANTA GUHA, M.A.

1. In his *French Revolution*, Burke 'offers in their highest and most comprehensive form all the considerations that belong to one side of the dispute'. 20

Discuss.

Or,

Referring to his *French Revolution* Burke says, 'The foundation of government is there laid, not in imaginary rights of men, but in political convenience, and in human nature . . . The foundation of government is laid in a provision of our wants, and in a conformity to our duties ; it is to purvey for the one ; it is to enforce the other.' 20

Develop the ideas underlying the above passage.

2. In his *Past and Present*, 'Carlyle is critical rather than constructive'. 20

Examine this statement.

Or,

Account for Carlyle's preference of the Past to the Present, and illustrate by references his 'magic gift of portraiture'. 20

3. Elucidate one of the following extracts :—

(a) It is a presumption in favour of any settled scheme of government against any untried project, that a nation has long existed and flourished under it. It is a better presumption even of the choice of a nation, far better than any sudden and temporary arrangement by actual election. Because a nation is not an idea only of local extent, and individual momentary aggregation, but it is an idea of continuity, which extends in time as well as in numbers and in space. And this is a choice not of one day, or one set of people, not a tumultuary and giddy choice ; it is a deliberate election of ages and of generations ; it is constitution made by what is ten thousand times better than choice, it is made by the peculiar circumstances, occasions, tempers, dispositions, and moral, civil,

and social habitudes of the people, which disclose themselves only in a long space of time. It is a vestment, which accommodates itself to the body. 10

(b) To whatever extremity of demand upon poetry our moral being may lead us we must not forget that the simplest fragment of pure poetry has its own metaphysical and moral finality. It may not enshrine our highest thoughts, but it will have enshrined our purest thoughts: and purity is an ultimate category. Nevertheless, we are what we are, and we demand from poetry, if it shall be great, thoughts that are not merely pure but high. The poet, being a man of like passions with ourselves, also demands it of himself. Sometimes high thinking it not for him; we feel that we could think better than he does, and he is not for us a great poet. Sometimes his high thoughts and ours seem marvellously at one; and then, since he has enabled us to possess our own thoughts, . . . he is for us a great poet.

#### SECOND HALF.

Examiner—DR. MOHINIMOHAN BHATTACHARYYA, M.A., PH.D.

1. Summarize and discuss Bacon's view of poetry. 20

Or,

Explain, with reference to the context, *any two* of the following passages :— 20

(a) The knowledge of man is as the waters, some descending from above, and some springing from beneath; the one informed by the light of nature, the other inspired by divine revelation.

(b) As hieroglyphics were before letters, so parables were before arguments; and nevertheless now and at all times they do retain much life and vigour, because reason cannot be so sensible, nor examples so fit.

(c) The soundest disclosing and expounding of men is by their natures and ends, wherein the weakest sort of men are best interpreted by their natures, and the wisest by their ends.

2. Examine *any two* of the following essays of Lamb, and bring out the moods of the author as reflected in them :— 20

*All Fools' Day; Dream-children; A Reverie; Mackery End, in Hertfordshire; A Bachelor's complaint of the Behaviour of Married People.*

Or,

Illustrate from *The Essays of Elia* the important characteristics of Lamb's style, and point out his mannerisms. 20

3. Bring out the ideas contained in *any one* of the following extracts, and comment on its literary characteristics :— 10

(a) Envy is the deformed and distorted offspring of *egotism*; and when we reflect on the strange and disproportioned character of the parent, we cannot wonder at the perversity and waywardness of the child. Such is the absorbing and exorbitant quality of our self-love, that it represents us as of infinitely more importance in our own eyes than the whole universe put together, and would sacrifice the claims and interest of all the world beside to the least of its caprices or extravagances: need we be surprised, then, that this little, upstart, over-weening self, that would trample on the globe itself, and then weep for new ones to conquer, should be uneasy, mad, mortified, eaten up with chagrin and melancholy, and hardly able to bear its own existence, at seeing a simple competitor among the crowd cross its path, jostle its pretensions, and stagger its opinion of its exclusive right to admiration and superiority?

(b) Men have entered into a desire of learning and knowledge, sometimes upon a natural curiosity and inquisitive appetite; sometimes to entertain their minds with variety and delight; sometimes for ornament and reputation; and sometimes to enable them to victory of wit and contradiction; and most times for lucre and profession; and seldom sincerely to give a true account of their gift of reason, to the benefit and use of men: as if there were sought in knowledge a couch whereupon to rest a searching and restless spirit; or a terrace for a wandering and variable mind to walk up and down with a fair prospect; or a tower of state for a proud mind to raise itself upon; or a fort or commanding ground for strife and contention; or a shop for profit or sale; and not a rich storehouse for the glory of the Creator and the relief of man's estate.

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GROUP A (a).

**(Selected Period of Drama)**

*The questions are of equal value.*

FIRST HALF.

Examiner—MR. KUMUDBANDHU RAY, M.A.

*Answer THREE questions only.*

1. Point out the distinctive contributions of Kyd to the development of the Elizabethan drama.
2. Marlowe 'cares nothing for the development of plot, and concentrates his whole attention on the exhibition of an abstract principle, embodied for the moment in a single character.' Illustrate.
3. Write a short essay on Shakespeare's conception of tragedy as compared with Marlowe's. Give illustrative references.
4. Discuss briefly Shakespeare's use of the supernatural, with special reference to *Richard III* and *Hamlet*.
5. It has been said that the basis of Shakespearean tragedy is melodrama. Discuss.

SECOND HALF.

Examiner—MR. AMIYAKUMAR SEN, M.A.

*Answer THREE questions only.*

1. Compare the comic manner of Ben Jonson with that of Shakespeare, illustrating your answer with special references to *Every Man in His Humour* and *As You Like It*.
2. 'Volpone is the most successful (of Jonson's comedies) in blending the spirit of the old Morality with the form of the Classic drama.' Illustrate.
3. Show the extent of Shakespeare's influence on the later Elizabethan drama, with special reference to *Philaster* and *The Duchess of Malfi*.
4. 'The London citizen cherished an idea of romance peculiar to himself, in which the love of enterprise and adventure was mixed with a



sentimentalism at once generous and domestic.' How far is this temper reflected in *The Shoemaker's Holiday*?

5. What aspects of Elizabethan dramatic activity are parodied in *The Knight of the Burning Pestle*?

Or,

'Ford often sacrifices unity of plot to his pre-occupation with mental analysis.'

Illustrate with reference to *The Broken Heart*.

#### GROUP A (b).

### (Early Nineteenth Century Poetry.)

#### FIRST HALF.

Examiner—PROF. JAYGOPAL BANERJEE, M.A.

The figures in the margin indicate full marks.

Answer Question 1 and TWO others.

1. 'Romanticism, beyond all other literary movements, is impregnated with speculative elements,' or 'A thing is romantic when it is strange, unexpected, intense, superlative, extreme, unique'. 18

Examine the statement with illustrative references to the representative works of the major poets of the Romantic Era.

2. How far may the *Ode to Duty* and the *Ode to the West Wind* be considered as characteristic of the genius of the two poets. 16

Or,

Compare in the same light *Lamia* and *Christabel* or *Prometheus Unbound* and *Manfred*.

3. Discuss either of the following :— 16

(a) In Wordsworth more than in Shelley pantheism is relieved by a high mystic spirituality.

(b) In the 'Ode on Intimations of Immortality' Wordsworth is essentially transcendental as in the 'Tintern Abbey' he is essentially naturalistic.

Or,

Illustrate the development of pure Nature poetry in Wordsworth's 'Lines Written in Early Spring', 'Expostulation and Reply', 'The Tables Turned', and 'Tintern Abbey'.

4. How is Shelley's conception of Beauty developed in *Hymn to Intellectual Beauty*, *Alastor*, and *Prometheus Unbound*? 16

Or,

Is Shelley a true Platonist in his treatment of Beauty and Love or is there in him simply a mediæval blending of sense and spirit?

5. Give a critical estimate of two of the following :— 16

(1) *The Ancient Mariner*, (2) *The Excursion*, (4) *Epipsychidion*,  
(4) *Childe Harold's Pilgrimage*, (5) *Hyperion*.

## SECOND HALF.

Examiner—DR. U. C. NAG, M.A. (CAL.), PH.D. (LOND.).

*The questions are of equal value.*

*Attempt ANY THREE of the following questions.*

1. *Either,*

'At the source of all Crabbe's poetry there lie a protest of the moral conscience as of the instinct for truth, a feeling of pity, and a craving for intellectual justice ; lastly, a bitterness from which the touch of a personal grievance is not absent.' Elucidate with illustrative reference.

*Or,*

Crabbe and Wordsworth draw their inspiration from nearly the same source but they differ widely in everything else that constitutes poetry, in the quality of their experience and the manner of its communication. Discuss with illustrative reference.

2. *Either,*

Write a short essay on 'Colour and Imagery in Keats'.

*Or,*

What do you understand by 'poetic interpretation of Nature'? Elucidate, with special reference to the poetry of Coleridge.

3. *Either,*

*Manfred* is Byron's finest achievement in poetry of the romantic type. Discuss.

*Or,*

Give your estimate of the literary value of *Don Juan*, with special reference to its substance and form.

4. Write brief critical notes on the following :—

- (a) Keats' Hellenism.
- (b) Shelley's Pantheism.

5. *Either,*

What is a lyric? Examine not more than six lyrics from *Golden Treasury of Songs and Lyrics*, Bk. IV, and bring out the outstanding features of the 19th century lyric impulse, and also state if it differs in any way from that of Shakespeare or Burns.

*Or,*

What do you understand by 'texture of verse'? Write a note on the verse-texture of either Coleridge's *Song of Pixie*, or *Kubla Khan* ; or Shelley's *Cloud*, or *Ode to West Wind* ; or Keats' *Ode to Autumn*, or *Ode to Nightingale*.

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## GROUP A (c).

**(Special Period of Prose.)***The questions are of equal value.*

## FIRST HALF.

*Examiner—MR. PRIYARANJAN SEN, M.A.**Answer ANY THREE of the following questions.*

1. George Eliot is very fond of dwelling on character contrasts. Explain and illustrate this statement from any of her novels that you have read.

2. Thackeray has been variously considered to be a cynic, a snob, and a puritan. Write your own idea of him as he appears from his novels.

3. 'Here were a sweep of tragic passion, a broad delineation of elemental hatred and love, a fusion of romantic intrigue with grave and sinister landscape, such as never had been experienced before.'

Elucidate this statement made with regard to *Jane Eyre*.

4. 'There is no piece of fiction known to me in which the domestic life of a few simple private people is in such a manner knitted and interwoven with the outbreak of a terrible public event, that the one seems but part of the other.'

Examine the above statement as a critical opinion on *A Tale of Two Cities*, and discuss the work as an historical novel.

5. Write notes on two of the following characters:—

Mrs. Mackenzie, Bardo de' Bardi, Rev. Irwine, Stryver, and Helen Burns.

## SECOND HALF.

*Examiner—MR. RAMAPRASAD MOOKERJEE, M.A. B.L.**Answer ANY THREE of the following questions.*

1. What is Carlyle's idea of a Hero? Discuss his philosophy of Hero-worship in relation to the Victorian Age.

2. Matthew Arnold wrote mainly to stir the English people out of their insularity and to recall to them that they were Europeans.

How far is this statement true?

3. 'Of the qualities of strength, pathos, and humour and again of rhythm, it may be said briefly that Macaulay has them all in the degree in which a good, but not the very greatest, orator has them.'

Discuss this opinion from the writings of Macaulay that you have read.

4. Show to what extent Newman, though a representative of his own age, drew his inspiration from the Romantic Revival.

5. 'Ruskin was not only a humanist in the realm of industry; he was a socialist . . . . But though a socialist he was not a democrat, but quite other . . . . Indeed, he has often been described, and described himself, as an aristocrat.'

Explain and criticize the above statement, and compare Mill and Ruskin in this respect.

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GROUP A (d).

**(Foreign Classics in Translation.)**

*The questions are of equal value.*

Answer ANY THREE questions from EACH half.

FIRST HALF.

Examiner—MR. K. C. MOOKERJEE, M.A.

1. 'Sophocles could never attempt the tremendous choric effects which Euripides achieves in such plays as the *Bacchæ* and the *Trojan Women*. His lyrics have not quite the strength to lift the whole drama bodily aloft with them.'

Is this criticism sound?

2. 'The art of tragedy perished with the Greeks ; even Shakespeare could not revive it.'

Discuss this view.

3. 'Ben Jonson is penetrated by the Senecan *ethos* ; but neither Marlowe nor Shakespeare owes anything to the Roman dramatist (i.e. Seneca).'

Consider this opinion.

4. 'Tragedy accomplishes through pity and fear its catharsis of such like emotions.' (*Aristotle*.) Do you think Aristotle has in this statement seized the essence of Greek tragedy?

5. Discuss *Æschylus*' handling of the character of Clytemnestra in the *Choephoreæ*.

6. What impressions do you receive of the personal characters of the three great Greek Tragedians from a study of their plays?

SECOND HALF.

Examiner—MR. R. C. BONERJEE, M.A. (OXON).

1. 'Form predominates in *Æschylus*, Matter in Euripides, but in Sophocles there is an exact balance of form and matter.'

Consider this opinion.

2. Does the *Agamemnon* conform to the Aristotelian rules for the construction of a good tragedy?

3. Euripides taught the Athenians 'to think see, understand, suspect evil, question everything.' (*Aristophanes*.)

Discuss this.

4. 'The *Electra* is on the whole the most Sophoclean and the most Shakespearean of all the plays of Sophocles.'

Do you agree?

5. 'Strong lives of all godlike endeavour  
Whom wisdom hath throned on her throne.'

(*Med. 844 Trans. Gilbert Murray.*)

Is there anything peculiarly Hellenic in the feeling embodied in these lines?

## GROUP A (e).

**(History and Principles of Criticism.)**

*The questions are of equal value.*

*Only THREE questions are to be attempted in Each half.*

## FIRST HALF.

*Examiner—PROF. JAYGOPAL BANERJEE, M.A.*

1. Is it correct to hold that Plato's *Ion* naturally leads on to Shelley's *Defence of Poetry*?

*Or,*

Compare Plato, Sidney, and Shelley regarding their views on poetic inspiration.

*Or,*

Indicate clearly the nature of Sidney's debt to Aristotle and to the Renaissance criticism of Italy.

*Or,*

Define and comment on Sidney's view regarding the function of poetry.

2. Can *imitation* as conceived by Aristotle be considered to be 'a creative act'?

*Or,*

On what grounds does Aristotle hold Tragic imitation to be higher than Epic imitation?

3. Show from Aristotle's definition of tragedy what he considers to be the essential function of tragedy.

*Or,*

Compare Aristotle's conception of the relation of poetry to life with that of Shelley.

4. 'The problem of beauty,' says Professor Babbitt, inseparable from the ethical problem.' Discuss Wilde's theory of art in the light of this view.

*Or,*

Examine the statement that æsthetes like Wilde propose 'to give to moral indolence a semblance of profound philosophy'.

5. Discuss *one* of the following:—

(a) 'A poem is the very image of life expressed in its eternal truth.'  
(*Shelley.*)

(b) 'The proper school to learn art is not Life but Art.'  
(*Wilde.*)

(c) 'The romantic ideal of art for art's sake means in the real world art for sensation's sake.'

## SECOND HALF.

*Examiner*—PROF. J. R. BANERJEE, M.A., B.L.

1. (a) 'Rhyme is unnatural in a play.'

(b) 'In the difference of Tragedy, Comedy, and Farce itself, there can be no determination but by the taste.'

Discuss the above statements after Dryden, and state your own views on these subjects with reasons to support them.

2. How does Coleridge establish that poetry, as poetry, is essentially ideal and generic and that the best part of human language, properly so called, is derived from reflection on the acts of the mind itself, that it is the product of philosophers, not of clowns or shepherds? How far do you agree with him, and why?

3. 'Poetry is the spontaneous overflow of powerful feelings: it takes its origin from emotion recollected in tranquillity; the emotion is contemplated till, by a species of reaction, the tranquillity gradually disappears, and an emotion, kindred to that which was before the subject of contemplation, is gradually produced, and does itself actually exist in the mind.'

Fully develop the ideas embodied in this sentence, and examine this statement.

Or,

(a) Shelley says that the distinction between poets and prose-writers is a vulgar error. How far do you agree with him?

(b) 'It' (Poetry) 'is at once the centre and circumference of knowledge; it is that which comprehends all science, and that to which all science must be referred.' (*Shelley*.)

Fully develop the ideas embodied in this extract, and examine this statement.

4. (a) Matthew Arnold says of Milton that of all the English race he is the one artist of the highest rank in the great style whom the English have. Do you agree with this estimate of Milton?

(b) Develop Matthew Arnold's statement that the function of criticism is to show disinterestedness. How far do you agree with him?

5. 'The comedy should be as in *King Lear*, universal, ideal, and sublime . . . . *King Lear* . . . may be judged to be the most perfect specimen of the dramatic art existing in the world.' Fully develop the thoughts contained in these two sentences. Do you agree with these views of Shelley?

Or,

Examine Matthew Arnold's view that 'more and more mankind will discover that we have to turn to poetry to interpret life for us'.

## GROUP B (a).

## (Old English Texts and Grammar.)

The figures in the margin indicate full marks.

## FIRST HALF

Examiner—PROF. V. K. AYYAPAN PILLAI, M.A.

1. Render into Modern English closely but idiomatically *three* of the following:— 30

(a) Ond þā'ongeat se *cynung* þæt, and hē on þā duru ēode, and þā unþēanlice hine wērede, of hē on þone *wēpling* lōude, and þā ūt rūsde on hine, and hine miclum gewundode; and hīe alle on þone *cynung* wærun feohtende, of þæt hīe hine *ofslægenne* hæfdon.

Give the context. Write notes on the words in italics, and give the principal parts of all the strong verbs in the passage.

(b) Heo þa, seo cwen Damaris, mid micelre gnornunge ymb þæs cyninges sleo hiere suna *pencende* wæs, hu heo hit gewrecan *mehte*; and þæt eac mid dædum *gelæste*, and hiere folc on tu to-dælde ægþor ge wifmenn, ge wæpnedmenn. Hio mid *þæm healfan* dæle beforan *þæm* cyninge farende wæs, swelce heo fleonde wære, of hio hiene *gelædde* on an micel slæd, and so healfa dæl wæs Ciruse after fylgende. Þær wearþ Cirus ofslægen, and twa þusend monna mid him. Seo Cwen het þa *þæm* cyninge *þæt heafod of aceorfan*, and beweorpan on anne cylle, so wæs afylled monnes blodes, and þus cwæþ. 'Pu þe þyrstende wære monnes blodes XXX wintra, drync nu þine fyllen'.

Write notes on the italicized words and phrases, and mark all the long vowels in the passage.

(c) Ðæs leasan spell *twarþ* gehwylcne monn ðara ðe wilnað helle *þiostro* tō fleonne, and to þæs sūðan Godes lechte to cumanne, ðæt hē hine ne besio to his *ealdan yflum*, swā ðæt hē hī eft swā fulllice ful-fremme, swā hē hī ær dyde; for ðæm swā hwā swā mid fulle willan his mod went to ðæm yflum ðe hē ær forlēt, and hī þonne fullfremeð, and hī him ðonne fulllice liciað and hē hī nūwe forlutan ne dencð, ðonne forlȳst he eall his *ærran* good, būton he hit eft gebete.

Explain the context, and give the origin of the radical vowels or diphthongs of the words in italics.

(d) Gif *ðeowwealh* Engliscne monnan *ofslīhþ*, þonne sceal se ðē hine āh weorpan hine to honda hlāforde and mægum, oððe LX scillinga gesellan wið his fēore. Gif hē þonne cēap nelle fore gesellan, þonne mūt hine se hlāford gefrēogan. *Gielden* siððan his mægum þone wer, gif he mægburg hæbbe frēo. Gif hē nūebbe, hēden his þa *gefān*.

Write notes on the words in italics.

(e) Ðeah *þpūla* hwylc hlāforde æthlēape, and of cristendome to wicinge weorðe, and hit æfter þām eft geweorde þæt wæpengewrixl weorðe gemūene (Shelley.)

þegene and þræle; gyf þræl þūne þegen fulllice āfylle, liege ægylde ealre his mægðe, and gyf se þegen þūne þræl þe hī ær āhlī fulllice āfylle, gylde þegen-gylde.

Write a note on the text from which the above is extracted.

2. Answer *two* of the following:—

10

(a) On what linguistic grounds may a distinction between *early* and *late* West Saxon be made? Illustrate from the passage you have read.

(b) Give an account of the Old English relative pronouns and their use.

(c) Distinguish between the strong and the weak declension of adjectives in Old English, and explain their usage.

(d) Decline *duru*, tǫð, æg.

(e) Write philological notes on *five* of the following:—

Hierðe-bōc, se byrdesta, wlcas geþeodes mann, scōndlic, stælhærgum, þā. 5temestan word, weofod, Sancte Michaelæles mæssan.

3. Translate (unseen):—

Ðā, sōna swā se fiscere geseah þæt se iunga man æt his fotum læg, he mid mildheortnesse hine up āhōf, ond lædde hine mind him to his hūse, ond fā ēstas him beforan legde þe he him to beodenne hæfde. Þāgiet hū wolde be his mihte mārān ārfæstnesse him gecyðan; toslāt þā his wūfels on twā, ond sealde Appolloniga þone healfan dīel þus cweðende: 'Nim þæt ic þē to sillenne hæbbe, ond gā intō þære ceastre. Wēn is þæt þū gemēte sumne þe þē gemiltsige. Gif ðū ne finde nænne þe þē gemiltsian while wænd þonne hider ongean, ond genihtsumige unc bām mine lītlan æhta, ond far ðē on fiscnað mid mē. Þeahhwæpere ic mynegie þē, gif þū, fultumiendum Gode, becymst to ðinum ærran wurðmynte, þæt þū ne forgyte minne þearfendlican gegitlan.'

## SECOND HALF.

Examiner—MR. JITENDRANATH CHAKRABARTI, M.A.

1. Render into modern English prose the following passage:— 10

Hrōðgār maþelode, helm Scyldinga :

'Ic hine cūðe cnihtwesende ;

wæs his ealdræder Ecgþeo hāten,

ðæm tō hām forgeaf Hrēpel Gēata

āngan dohtor ; is his eafora nū

heard hēr cumen, sōhte holdne wine.

Donne sægdon þæt sǣliþende,

þā ðe gitsceattas Gēata fyredon

þyder tō þance, þæt hē priftiges

manna mægenoræft on his mundgripe

heaporōf (= brave in battle) hæbbe. Hine hālig God

for ārstafum ūs onsende,



tō West-Denum, þæs ic wēn hæbbe,  
 wið Grendles gryre. Io þūm gōðan sceal.  
 for his mōðþræce (=daring) mādmas bēodan.  
 Bēo ðu on ofste, hāt in gān  
 sēon sibbegedriht (=band of Kinsmen) samod  
 ætgædere; gesaga him ðac wordum, þæt his sint wilcuman  
 Deniga lēodum.'

2. Render into modern English prose *any three* of the following passages, adding notes on the words in italics:— 24

- (a) Hē æt wige gecrang  
 ealdres scyldig, and nū ðær cwōm  
 mihtig *mānscaða*, wolde hyre mæg wrecan,  
 ge feorr hafað fūhðe gestāled,  
 þæs þe þincean mæg þegne monegum,  
 sē þe æfter sincgyfan on sefan grēoteþ  
 hreþerbealo hearde; nū sēo hand ligeð,  
 sēo þe cōw *wel-hwylcra* wilna dohte.
- (b) For þon nū min hyge hweorfeð ofer hreþerlocan,  
 min *mōdsefa* mid mēreflōde  
 ofer hwæles ēpel, hweorfeð wide  
 eorþan *scēalas*, cymeð eft tō mē  
 gīfre and grēdig; *gielleð ānfloga*,  
 hweteð on (h) wirlweg hreþer *unwearnum*  
 ofer holma gelagu.
- (c) Tō hēanlic mē þinceð  
 þæt gē mid urum sceattum to scype gangon  
*unbefohtene*, nū gē þus feorr hider  
 on *ūrne* eard inn becomon;  
 ne sceole gē swa sōfte sinc gegangan:  
 ūs sceal ord and ecg ūr *geszeman*,  
 grimm gūðplega, ūr wē *gafol* syllon.
- (d) Hēr gē magon sweotole sigerōfe hæleð,  
 lēoda *rūs*swan, on ðæs lādestan  
*līwðenes* heaðorinces hēafod starian,  
 Olofernus unlifigends,  
 þe ūs mōnna *māst* mordra gefrēmede,  
 sārra sorga, and þæt swyðor gyt  
*ȳcan* wolde; ac him ne *Uðe* God  
 lēngran lifes. þæt hē mid *līwðum* ūs  
 eglān *mōste*: io him ealdor oðþerng  
 þurh Godes fultum.

3. Answer *two* of the following questions:—

16

(a) *Either,*

'It has been the fate of *Beowulf* to be subjected to the theory of multiple authorship.' Discuss.

*Or,*

Estimate the epic value of *Beowulf*.

(b) Write a short note on Old English lyric poetry.

(c) Name the poem from which the piece—*The Fall of the Angels*—has been taken, and discuss fully the question of its authorship.

GROUP B (b).

### (Middle English Texts.)

*The figures in the margin indicate full marks.*

FIRST HALF.

Examiner—MR. NALINIMOHAN CHATTERJEE, M.A.

I. Translate into modern English *any four* of the following passages, adding grammatical and etymological notes where necessary:—

28

(a) Pus queþ Alured.

Pe eorl and þe eþelyng.

ibureþ vnder góðne King.

Þat lond to leden.

myd lawelyche deden.

And þe clerek and þe knyht.

he schulle démen eueryche riht.

Pe poure and þe ryche.

demen ilyche.

Hwych so þe mon soweþ.

al swuch he schal mowe.

And eueruchyes monnes dom.

to his owenre dure churreþ.

(b) ..... Pu atwitest me mine mete,

And seist þat ich fule wiȝtes ete :

Ac wat etestu, þat þu ne liȝe :

Bute attercoppe and fule vliȝe ?

And wormes, ȝif þu miȝt finde

Among þe volde of harde rinde ?

ȝet ich can do wel gode wike,

Vor ich can loki manne wike ;

And mine wike beoþ wel gode,  
 Vor ich helpe to manne vode ;  
 Ich can nimen mus at berne,  
 And ek at chirche in þe dërne.

- (c) *Pe King Willam abod is time · vorte winter was al oute,*  
*& þo com he mid gret poer · & mid so gret route,*  
*þat hii nadde no poer · aʒen him uor to stonde,*  
*Ac lete þe king þe maistrie · & flowe to Scotlonde,*  
*& hom to hor owe lond · þe Deneis flowe aʒé.*  
*þe king destruede þe contreie · al aboute þe se,*  
*of frut & of corne · þat þer ne bileuede noʒt*  
*Sixti mile fram þe se · þat nas to grounde ibroʒt.*  
*& al þat þe Deneis · ne mete ne founde þere*  
*Wanne hii come to worri · & so þe feblore were.*
- (d) *be meke & mesurabul · nouʒt of many words,*  
*be no tellere of talis · but trewe to þi lord,*  
*& prestely for porc men · profer þe cuer,*  
*For hem to rekene wiþ þe riche · in riȝt & in skille,*  
*be feiʒtful & fre · & ever of faire speche,*  
*& seruisabul to þe simple · so as to þe riche,*  
*& felawe in faire manere · as falles for þi state ;*  
*so schaltow gete goddes louc · & alle gode mennes.*
- (e) *Liȝtliche Lyȝere · leop a-wey þennes,*  
*Lurkede þorw lones · to-logged of Monye ;*  
*He nas nouȝwher wel-come · for his monytales,*  
*Bote our al I-hunted · and hote to trusse.*  
*Pardoners hedden pite · and putten him to house,*  
*Wosschen him and wrongen him · & wounden him in cloutes,*  
*And senden him on sonendayes · wiþ scales to churches,*  
*And ʒaf pardun for pons · poundmele aboute.*
- (f) *Boþe to sowen and to setten · while I swynke mihte,*  
*I have ben his felawe · þis fittene wynter ;*  
*Boþe I-sowed his seed · and suwed his beestes,*  
*And eke I-kept his corn · I-caried hit to house,*  
*I-dyket and I-doluen · I-don what he hihte,*  
*With-Innen and withouten · I-wayted his profyt ;*  
*þer nis no laborer in þis leod · þat he loueþ more,*  
*For þauh I sigge hit my-self · I serve him to paye.*

2. Discuss the effect of the Norman conquest on Middle English language and literature. 12

Or,

Write a short review of the Middle English Romances.

12

3. Render into modern English *one* of the following passages:—10

(a) *Pe batayl duredede fram vndern of þe day to euesong tyme; & nere noþer party wolde wyþ-drawe; bote þe duc hys archers hadde here vorþ. Panne þe duc made a token to hys men þat hy scholdo feyne to vle, and by þat wyle Englysche men were bygyled & desarayede ham, as hyt wore, vor to pursywe & to rese on here enymyes. Bote whanne Englysche men were so out of aray, þe Normans arayede ham ofte & tornde aȝe oppon þe Englysche men þat were out of aray, & chasede ham in everyche syde.*

- (b) In daies and in nyhtes nyne,  
 Wiþ gret trauaile and wiþ gret pyne,  
 Sche was pourveid of every piece,  
 And torneþ homward into Grece.  
 Before þe gates of Eson  
 Hir char sche let away to\*gon,  
 And tok out ferst þat was þerinne;  
 For þo sche þoghte to beginne  
 Suche þing as semeþ impossible,  
 And made hirseluē invisible,  
 As sche þat was wiþ air enclosed  
 And mihte of noman be desclosed.

#### SECOND HALF.

*Examiner*—MR. HIRANKUMAR BANERJEE M.A., B.LITT.(OXON.)

1. Explain *any three* of the following extracts, and add etymological and other notes where necessary:—

24

- (a) To thee clepe I, thou goddesse of torment,  
 Thou cruel Furie, sorwing ever in payne;  
 Help me, that am the sorwful instrument  
 That helpeth lovers, as I can, to pleyne!  
 For wel sit it, the sothe for to seyne,  
 A woful wight to han a drery fere,  
 And, to a sorwful tale, a sory chere.
- (b) Think eek, how elde wasteth every houre  
 In eche of you a party of beautee;  
 And therefore, er that age thee devoure,  
 Go love, for, olde, ther wol no wight of thee.  
 Lat this proverbe a lore unto yow be;  
 'To late y-war, quod Beautee, whan it paste';  
 And elde daunteth daunger at the laste.
- (c) With him ther rood a gentil Pardonere  
 Of Rouncivale, his frend and his compeer,  
 That streight was comen fro the court of Rome.  
 Ful loude he song, 'Com hider, love, to me.'  
 This somnour bar to him a stif burdoun,  
 Was nevere trompe of half so greet a soun.

- (d) And in his gere, for al the world he ferde  
 Natoonly lyk the loveres maladye  
 Of Hereos, but rather lyk manye  
 Engendred of humour malencolyk,  
 Biforen, in his celle fantasyk.  
 And shortly, turned was al up-so-doun  
 Bothe habit and eek disposicioun  
 Of him, this woful love-re daun Arcite.
- (e) Ther saugh I how woful Calistopee,  
 Whan that Diane agreved was with here,  
 Was turned from a womman to a bere,  
 And after was she maad the lode-sterre;  
 Thus was it peynt, I can say yow no ferre;  
 Hir sone is eek a sterre, as men may see.
- (f) So hidous was the noyse, a! benedicite!  
 Certes, he Jakke Straw, and his meynne,  
 Ne maden nevere shoutes half so shrille,  
 Whan that they wolden any Fleming kille,  
 As thilke day was maad upon the fox.  
 Of bras they broghten bemes, and of box,  
 Of horn, of boon, in which they blewe and pouped,  
 And therewith thay shryked and they houped;  
 It semed as that hevene sholde falle.

2. Give an account of the development of the legend of Troilus and Cressida, and examine the criticism that Chaucer's Pandarus is a compromise between Boccaccio's Young Knight and the Shakespearean pander. 16

Or,

Comment on the criticism that Chaucer's pilgrims are types selected partly for the contrast of their particular humours, and partly to fit the variety of the tales to be told.

3. Render *one* of the following extracts into modern English:— 10

- (a) The ministre and the norice un-to vyces,  
 Which that men clepe in English ydelnesse,  
 That porter of the gate is of delycles,  
 T'eschue, and by hir contrarie hir oppresse,  
 That is to seyn, by leveful bisnesse,  
 Wel oghten we to doon al our entente,  
 Lest that the feend thurgh ydelnesse us hente.  
 For he, that with his thousand cordes slye  
 Continuelly us waiteth to biclappe,  
 Whan he may man in ydelnesse espye,  
 He can so lightly cacche him in his trappe,  
 Til that a man be hent right by the lappe,  
 He nis nat war the feend hath him in honde;  
 Wel oughte us werche, and ydelnesse withstonde.
- (b) Now shul ye understonde, that the relevinge of Avarice is misericorde, and pitee largely taken. And men mighten axe, why that misericorde and pitee is relevinge of Avarice? Certes, the avaricious man sheweth no pitee ne misericorde to the nedeful man; for he delyteth him in the kepinge of his tresor, and nat in the rescowinge ne relevinge of his evene-cristene. And therefore speke I first of misericorde. Thanne is misericorde, as seith the philosophre, a vertu, by which the corage of man is stired by the misese of him that is mised. Upon which misericorde folweth pitee, in parfouming of charitable werkes of misericorde.

## GROUP B (c).

**(Teutonic Philology.)**

*The questions are of equal value.*

*Attempt THREE questions from EACH half.*

## FIRST HALF.

*Examiner—MR. JITENDRANATH CHAKRABARTI, M.A.*

1. Explain Verner's Law, and prove by examples that Verner's Law goes farther than Grimm's Law, and explains cases in which the latter seems to fail.

2. Trace the development of the Germanic diphthongs *ai*, *au*, *eu*, and *iu* of accented syllables in Old English. Illustrate your answer by suitable examples. Give illustrative examples of vowel contraction in Old English.

3. Annotate phonologically *eight* of the following words:—  
*forlorn, vizen, mōdor, cōren, nerian, brūhte, gūs, slēan, hundred, other, red, five.*

4. How were the nouns classified in Old English for the purpose of declension? Give the declension of *any four* of the following nouns in Old English:—

*guma* (masc.), *duru* (fem.), *fūt* (masc.), *būc* (fem.), *ēage* (neut.) *dæg* (masc.), *secg* (masc.)

*Or,*

Trace the history of Possessive and Interrogative Pronouns.

5. How are the verbs classified in the Germanic languages? What is the principle underlying this classification? Give the Pret. Sing., Pret. Pl., and Pret. Ptc. forms of the following strong verbs in Old English:—

*berstan, cōosan, sprecan, and fāran.*

## SECOND HALF.

*Examiner—MR. NALINIMOHAN CHATTERJEE, M.A.*

1. Point out the functions and signification of the Genitive case in Old and Middle English, with illustrations from Modern English.

2. Write short notes on the following constructions:—

- (a) She was his own age.
- (b) His top was docked lik a preest biforn.
- (c) I am ful wo.
- (d) A friend of his.
- (e) Him one.
- (f) Me overthrown.
- (g) Lord Angelo dukes it well.
- (h) He shall take of mine.

3. Illustrate and compare the use of the Relative Pronoun in Middle and Modern English.

4. What is meant by the first consonant-shifting in Grimm's Law? Give examples.

5. Attempt a classification of the vocabulary of the English language with reference to its various sources.

6. Comment on *any eight* of the following:—  
 nickname, children, pretty, pea, witch, hamlet, captain, wit, cockney.

GROUP B (e).

(Gothic.)

Examiner—MR. SUHASCHANDRA RAY, M.A.

FIRST HALF

*The questions are of equal value.*

Answer ANY THREE questions.

1. (a) Render into Modern English:—

Jah bi wastjōs hwa saúrgáiþ? Gakunnaiþ blōmans háipjōs, hwáíwa wahsjand; nih arbaidjand nih spinnard. Qiþuh þan izwis patei nih Saúlaúmōn in allamma wulþáu seinamma gawasida sik swē áins þize. Jah pandē þata hawi háipjōs himma daga wisandō jah gistradagis in aúhn galagiþ guþ swa wasjþ, hwáíwa máis izwis leitil galáubjandans?

Disjoin *qiþuh*. Comment on *himma* and *mais*.

(b) Render into Modern English:—

Jah qap du imma: saíhw ei mannun ni qipáis wáht; ak gagg þuk silban atáugjan guþjin, jah atbair fram gahrúineinái þeinaí patei anabáuþ Mōsēs, du weitwōðipái im. Ip is usgaggands dugann mērjan filu jah usqippan þata wáurd, swaswē is juppan ni mahta andáugjō in baúrg galeiþan, ak ūta ana áupþáim stadim was; jah *iddjēdun* du imma allaþrō.

Comment on the *italicized* words.

2. (a) Render into Modern English:—

Háuseiþ! Sáí, urrann sa Saiands du saian fráíwa seinamma. Jah warþ, miþþanei saísō, sum ráihtis gadráus faur wig, jah qemun fuglos jah frētun þata. Anþarup-þan gadráus ana stáinahamma, þarei ni habáida airþa managa, jah suns urrann, in þizeí ni habáida diupáizōs airþōs; at sunnin þan urrinandin ufbrann, jah untē ni habáida wáurtins gapaúrsnōða.

Derive the *italicized* words.

(b) Render into Modern English:—

Untē is ufta eisarna m bi fōtuns gabuganáim jah naudibandjōm eisarnei-náim gabundans was, jah galáusida af sis þōs naudibandjōs, jah þō ana fōtum eisarna gabrak, jah manna ni mahta ina gatamjan. Jah *sinleinō* nahtam jah dagam in aúrahjōm jah in fáirgunjam was hrōppjands jah bliggwands sik stáina m.

Derive the *italicized* words. Comment on *nahtam*.

## 3. (a) Render into Modern English:—

Iþ Iēsus qaþuh du im ; ni wituts *hwis* biðjats : *magutsu* driggkan stikl þanei ik driggka, jah dāupeināi þizāiei ik dāupjāda, ei *dāupjāindōu* ? Iþ eis qēþun du imma : magu. Iþ Iēsus qaþuh du im ; swēþāuh þana stikl þanei ik driggka, driggkats, jah þizāi dāupeināi þizāiei ik dāupjāda dāupjāda ; iþ þata du sitan af tāihswon meinai aþþāu af hleidumein nist mein du giban, alja þāimeī manwīþ was.

Parse the *italicized* words.

## (b) Render into Modern English:—

Aþþāu hwas þiudans gaggands stiggan wiþra anþarana þiudan du wigana, niu gasitands frúrþis þankeiþ, *siūu* mahteigs miþ tāihun þūsundjōm gamōtjan þamma miþ twāim tīgum þusundjō *gaggandin* ana sik ? Eipāu jabāi mist mahteigs nāuhþanuh fāirra imma wisandin insandjands āiru *biðjiþ* gawairþjis.

Give the preterite forms (first person, singular and plural) of the roots of the *italicized* words.

## 4. (a) Render into Modern English:—

Jabāi þis *faihrwaus* wēseiþ, aþþau sō manasēds swēsans frijōdēdi ; aþþan untē us þamma fāirhwāu ni sijup, ak ik gawalida izwis us þamma fāirhwāu, *duþþo* fījaid izwis sō manasēþs. Gamuneiþ þis waurdis þatei ik qaþ du izwis : nist skalks māiza *frāujin* seinamma. Jabāi mik wrēkun, jah izwis wrikand ; jabai mein waurd fastāidēdeina, jah izwar fastāina.

Decline the stems of the *italicized* words. Give the positive and superlative of *māiza*.

## (b) Render into Modern English:—

All bōkō gudiskāizōs ahmateināis jah paurftōs du lāiseināi, du gasahtāi, *du* garaihteināi, *du* talzeināi in garaihtein, ei ustaūhans sijai manna guþs, *du* allamma waurstwē gōdāizē gamanwīþs.

Parse *bōkō*. Derive *paurftōs* and *ustaūhans*.

## SECOND HALF.

The figures in the margin indicate full marks.

Attempt Question 5 and two others.

1. Give the Old English equivalents of any five of the following words, and account philologically for the differences in form:— 15

*gawasida*, *mais*, *hauseiþ*, *faiṛgunjam*, *nist*, *biðjiþ*, *faiṛhwāus*.

2. Show how the Present Indicative Conjugation of the Gothic Strong Verbs is developed from the Primitive Germanic. 15



3. Briefly trace the development of Gothic vowel sounds from the Indo-Germanic vowel system. 15

4. Decline the Personal Pronoun (Third Person). Decline *gasts* or *baurgs*. Decline *nimand* (Feminine). Conjugate *sōkjan* (Preterite Plural, Indicative and Subjunctive). Conjugate *witan* or *magan* (First Person).

5. Render into the Modern English:— 20

(a) Berun þan du imma barna, ei im attaitoki; gasaihwandans þan siponjōs, andbitun ins. Ip̃ Iesus athaitand; ins qaþ, Letiþ þo barna gaggan du mis, jah ni warjiþ þo, unto þizo swaleikaize ist þiudangardi guþs. Amen, qiþa izwis, saei ni andnimiþ þiudangardja guþs swe barn, ni qimiþ in izai.

(Luke XVIII; 15—17.)

(b) Amen, amen, qiþa izwis, saei galaubeiþ du mis, aih libain aiweinon. Ik im sa hlaifs libainais. Attans izwarai matidedun manna in aupidai, jah gaswultun. Sa ist hlaifs saei us himina atstaig, ci saei þis matjai, ni gadauþnai. Ik im hlaifs sa libanda, sa us himina qumana.

(John VI; 47—51.)

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## GROUPS A AND B.

### EIGHTH PAPER

#### (Essay.)

Examiners— { Mr. HUMAYUN Z. A. KABIR, B.A.(OXON.), M.A.  
                  { Mr. C. C. BISWAS, C.I.E., M.A., B.L.

*The figure in the margin indicates full marks.*

1. Write an essay on *one* of the following subjects:— 100

- (a) Democracy and Literature.
  - (b) The Psychological Novel.
  - (c) Imagination and Culture.
  - (d) The influence of Carlyle.
  - (e) The Sources of the English vocabulary.
  - (f) A comparison of the Drama and the Novel as mirrors of English social life.
-

## SANSKRIT

## FIRST PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner—MM. PT. SITARAM SASTRI*

*The FIRST question and ANY TWO of the remaining questions are to be answered.*

1. यद्दिन्द्राङ्गप्रथमजामङ्गी ना-

20-

मान्मायिनाममिनाः प्रीत मायाः ।

आत्सर्व्यं जनयन्मामुषासं

तादीक्षा शत्रुं न कृत्वाविविस्ते ॥ १ ॥

वयः पवथो मधुवाङ्मने रथे

सीमस्य वेनामन विश्व इविदुः

वयः स्तम्भासःस्तम्भितास आरभे

विर्नक्तं याद्यस्तिर्व श्विना दिवा ॥ २ ॥

अभौहतं कृशनेर्विश्वरूपं

हिरण्यशस्यं यजती वृद्धनाम् ।

आस्थाद्रथं सविता चिवभानुः

कृष्ण रजांसि तविषीं दधानः ॥ ३ ॥

पृषद॒न्वा म॒रुतः॑ पृ॒त्रिमा॒तरः॑

शु॒भं या॒वानो॑ वि॒दधे॑षु ज॒न्मयः॑ ।

अ॒ग्निजि॒ह्वा म॒नवे॑ सू॒रच॑क्ष॒सो

वि॒श्वे नो॑ दे॒वा अ॒वसा॑गम॒ग्निह ॥ ४

र॒विर्न चि॒त्वा सू॒रो न स॒न्दृ-

गायु॒र्न प्रा॒णो नि॒त्यो न सू॒तः ।

त॒क्रा न भू॒र्षिर्व॑ना सि॒षत्ति॑

प॒थो न धे॒नुः शु॒चिर्वि॑भा॒वा ॥ ५ ॥

प्र नू॑ म॒हिलं॑ ह॒वभ॑स्य वी॒चं

यं पू॒रवो॑ ह॒वह॑णं स॒चन्ते॑ ।

वै॒श्वान॑रो द॒स्युम॑ग्नि॒र्ज घ॒र्भो

अ॒धूनी॑त्का॒ष्ठा अ॒व श॒म्बरं॑ भेत् ॥ ६ ॥

उपर्युक्तमन्त्राणां मध्ये किमपि मन्त्रपञ्चकं व्याख्येयम् ।

२. प्रथमप्रश्ने प्रथममन्त्रे “किल तादीला” पदयोः कथं सूपपत्तिः ? द्वितीयमन्त्रे द्वितीयपादस्य कथं सुलपता ? तृतीये मन्त्रे रथस्य रूपणं वा युज्येत यथार्थं वा रूपम् ? चतुर्थे मन्त्रात् पृत्रिमातृत्वं कथमुपपद्यते ? षष्ठे च वैश्वानरस्वरूपविवयो विशेषो भाष्योक्तो विलिख्यः । 15

३. आयातं रुद्रवर्तनी, दक्षा हिरण्यवर्तनी इत्युक्तमग्निर्हिरण्यवर्तनीत्वं रुद्रवर्तनीत्वस्योपपादनीयम्, सदस्यतेर्देवस्य “दिवो न सप्रमखसम्” इत्युच्यमानं सप्रमखत्वं “दिवो ने”-त्युपमानाश्रयविविच्य, आह॒प्नोति॑ इ॒विष्क॑र्तति॒ प्राच॑ क॒णोत्य॑ध॒रम् ॥ इ॒वो दे॒वेषु॑ ग॒च्छति॑ ॥ इति मन्त्रार्थस्य प्रदर्शनीयथा “आह॒ प्राचम्” इति पदयोर्द्वितीयाहस्य च सम्यक् सार्थकं विवृतं भवेत् । 15

4. इन्द्रोदधौ चो अस्थमिहं वायुप्रतिश्रुतः ।

15

जघान नवतीर्गवे ॥ १ ॥

अत्र नवनवतिपदाभ्यां का सङ्ख्या किमर्थिका मन्त्रव्या ? ( भाष्यकारिण किमुच्यते ) ? अवत्य-भाष्यस्य मन्त्रान्तरविरोधसम्भवा न वा ? भाष्योक्तापेक्षया सङ्ख्यान्तरविवक्षणे भाष्यस्य का गतिः ? उदधौ चो अस्थमिहं वविनाशनं कथमुपपादितं भाष्यकृता ? सामञ्जस्यस्यापरोऽप्यर्थः कथनं प्रदर्शयितुं शक्वा न वा ? अस्तिपक्षे सत्यक् प्रदर्शनीयः ।

5. सर्वदुःखायाः । अश्वबुध्यम् । उद्वचि । हरः । वनः । बन्धुरः । जगदीः । तूर्धयाणम् । व्युत्पत्तिप्रदर्शनपुरश्चरमेवां पदानामर्थान् प्रदर्श्य, “अभिज्ञवस्य तृतीयेऽङ्गनि आश्रितारुते शस्त्रे इदं सुक्तं जातवेदस्य निविहानोयम्” इति भाष्यपङ्क्तौ रथो विवरणीयः । 15

6 निरुक्तकारानुक्रमणिकाकारयोर्भेदानुसारेण निववरूपविष्णूनां स्वरूपाणि विविच्यतां मन्त्रानुगुण्येन । 15

## SECOND HALF

Examiner—PT. LAKSHMINARAYAN CHATTERJEE, VEDANTASASTRI, M.A.

The FIRST question and ANY TWO of the remaining questions are to be answered

1. मौमांसकानां को नामापूर्वविधिः ? को नियमविधिः ? का वा परिसंख्या ? परिसंख्यायां त्रयो दोषा इत्युक्तम् । के ते दोषाः ? अपूर्वविधि-नियमविधि-परिसंख्यानां परस्परप्रभेदः सत्यगालीच्यताम् । ‘अश्वाभिधानौमादयो’—इत्यत्र परिसंख्याया उपयोगित्वमाविष्कृत्यताम् । नियमपरिसंख्ययोः प्रभेदः शाब्दिकानामालङ्कारिकाणां च सम्प्रती न वेति रुष्टु प्रदर्श्यताम् । 20

2. ऋचां त्वः पोषमाप्ते पुपुष्वान् गायन्त्वा गायति शक्ररौधु । 15

ब्रह्मा त्वां वदति जातविद्यां यज्ञस्य मावां विमिमीत उ त्वः ॥

कस्मिन् प्रसङ्गे ऋषेणावतारिता भाष्यकारिण ? अस्या ऋचो निरुक्तानुसारि भाष्यकृद्वाक्यान्मुद्रवाक्यातां यथासामर्थ्यं यास्ककृतव्याख्यानमपि प्रदर्श्यताम् ।

3. नन्वर्थप्रकाशमार्गत्वे सति दृष्टं प्रयोजनं लभ्यत इति युक्तिमात्रमिदमुच्यते । न त्वेतदुपोल्लेखकं किंचिद्भूतं लिङ्गं पश्चात् इत्याशङ्क्यगतं सर्वं सन्देहं निरस्योत्तरपक्षस्यापनेन तावत् प्रदर्श्यताम्—“विवक्षितार्था मन्त्राः प्रयोगकाले स्वार्थप्रकाशनायेवोच्चारयितव्या” इति । 15

4. “रचोद्भूतमन्त्रवचनद्वेष्टाः प्रयोजनम्” व्याकरणस्येति वार्तिकल्लङ्घितम् ।  
रचोत्पादीनां व्याख्या कार्या । प्रतिक्रमं स्तुतिभ्यो यथायथमुदाहरणमुपन्यसनीयम् । 15

5. व्याख्यायन्तामधोलिख्यमानानि :— 15

(१) रात्रिभवनव्यायः । (२) विश्वजिन्नायः । (३) स्यात्स्वन्वयायः । (४) अप्राप्तः  
चानुपपत्तिः प्रयोगे हि विरोधः स्याच्छब्दार्थस्वप्रयोगभूतसंख्यादुपपद्यते । (५) आकालिकेष्टा ।

## SECOND PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner—Pt. SAKALNARAYAN SARMA*

*Answer ANY THREE questions.*

(प्रति प्रश्नम् (a) (b) अनयोरेकस्योत्तरं देयम् ।)

1. (a) कस्मादिगणे सर्पि षकुण्डिकाशब्दपाठस्य किं फलम् ?  
(b) संस्कृतीपजाष्टीत्तरशतं रूपाणि कथं जायन्ते ?
2. (a) उभयशब्दस्य द्विवचनविषये कैथट-हरदत्तमतभेदकारणं प्रदर्शनीयम् ।  
(b) लाघादेशविधायकनिषेधकसूत्राणि सार्धोदाहरणानि लिख्यानि ।
3. (a) पूर्वस्य किं परस्य साभूत् कटुका ।  
(b) कृति किं तद्धिते साभूत् कुतपूर्वोक्तम् । अनयोर्वैशद्येन विवेचना कर्तव्या ।
4. (a) कटी, हिमानी, हवघ्नः, स्वप्ति, यूयम्, सर्वस्यै, जरसः ।  
(b) गेयो साख्यः सास्त्रम् । जटाभिस्तापसः । पञ्चगङ्गम् । पञ्चनापितः,  
कुशकाशम्, दिवा ।

एषां प्रयोगाणां साधुत्वं विशेषस्वप्रदर्शनपूर्वकं विधेयम् ।

5. (a) अक्षौ अचक्षा अचक्षा अत्राविति चतुष्टयम् । रूपाणामिह तक्-कृत्व-चलीपानां  
विकल्पनात् ।

(b) तस्येदमित्यपत्येऽपि वाधनार्थं कृतं भवेत् । उत्सर्गः शेष एवासौ ह्यन्यस्य प्रयोजनम् ।  
अनयोर्व्याख्या विधेया ।

### SECOND HALF

*Examiner—Mr. KSHITISCHANDRA CHATTERJEE, M.A.*

*Answer ANY THREE*

1. How far has the spirit of Pāṇini's Aṣṭādhyāyī been preserved in Bhaṭṭoji's Siddhāntakaumudī ?

2. Explain fully *any three* of the following sūtras :—

कञ्चानुप्रयुज्यते लिटि । अत एव इन्मन्त्रेऽनादिश्रादिर्लिटि । कञ्चानुप्रयुज्यते लिटि ।  
योः पुयण् व्यपरे । समुच्चयेऽन्यतरस्याम् ।

3. Comment grammatically on *any three* of the underlined words in the following :—

(1) विद्यापयन् विद्यितमात्महन्तौ

सिंहोरसत्त्वं निजगाद सिंहः ॥

(2) सु सन्ततं दर्शयते गतस्थः

कृताधिपत्यामिव साधु बन्धुताम् ॥

(3) प्रार्थयन्ति शयनोत्थितं प्रियाः ।

(4) श्रुत्वा च स्वमांसादिभिरपि क्षुत् प्रतिहन्तुम् ।

4. (a) State the following forms :—

कृञ् in लिट्, 3rd Sing., अञ् in लुङ्, 3rd Sing., जि in लिट्, 2nd Sing., चक्षु in लिट्, 2nd Sing.

(b) Explain the formation of *any five* of the following :—

आत ; आर्थगृह्य ; दूषयति ; अचौकमत ; अनर्चा ; आवृजे ; अवैपौत् ।

5. Explain fully *any two* of the following :—

प्रत्यये किम् ? वन्नय ।

विप्रतिषेधे परं कार्यम् ।

सादेशस्य शानचः शित्वमपोह लिङ्गम् ।

### THIRD PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

Examiner—MR. KSHITISCHANDRA CHATTERJEE, M.A.

( INDO-ARYAN ) SANSKRIT LINGUISTICS

Answer ANY THREE questions.

Full Marks—66.

1. Write a note on the Indo-European Speech-family, and indicate the position of Sanskrit within this family. Discuss the terms *Aryan*, *Indo-Iranian*, *Indo-European*, *Indo-Germanic*, *Wiros*. 22

2. Was Classical Sanskrit ever a spoken language? Discuss the exact relationship among Vedic, Classical Sanskrit, Pali, Asokan Prakrits, and the Prakrits of the Sanskrit dramas. 22

3. Explain the following terms in the light of modern

Phonetics : घोष, ञघोष, महाप्राण, जिह्वामूलीय, उष्ण, अभिनिधान, स्वरभक्ति. Discuss the ancient pronunciation of sounds of the ञ-वर्ग and the त-वर्ग 22

4. Write a note on *Ablaut* in Indo-European and in Sanskrit, giving briefly the various types or classes of *Ablaut* in Indo-European. 22

5. Discuss the nature of the 'Cerebral' sounds of Sanskrit, and write a note on cerebralization in Indo-Aryan (both Sanskrit and the Prakrits). 22

6. Explain *seven* of the following forms in the light of historical phonology or morphology of Sanskrit :— 22

- (i) गौः—plural गावः ; (ii) एधि as the imperative of  $\sqrt{\text{अस्}}$  ; (iii) वाक्—plural वाचः ; (iv) ददति— $\sqrt{\text{दा}}$ , लट् चति ; (v) समाट् as the nominative singular of समाज् ; (vi) हितः as the passive participle of  $\sqrt{\text{धा}}$  ; (vii) शिथिलः ; (viii) पश्यति ; (ix) हरिश्चन्द्रः ; (x) नरान् (accusative plural of नर), but नरांस (with intrusive sibilant in *Sandhi*) ; (xi) षोडश form षट् + दश ; (xii) तुरीयः as the ordinal of चतुः ; (xiii) the negative prefixes अ and अन् ; (xiv) भिन्नः from  $\sqrt{\text{भिद्}}$  ; (xv) उद्दालकः from  $\sqrt{\text{दृ}}$  .

7. Write a note on the Prakritic elements in the Vocabulary of Classical Sanskrit, or on the *Deśi* element in Prakrit. 22

8. Classify the moods and tenses of Sanskrit (i) according to the traditional system, and (ii) according to the findings of Indo-European linguistics. 22

## SECOND HALF

Examiner—MM. PT. GURUCHARAN TARKADARSANTIRTHA

पञ्चसु द्वयोरुत्तरं कार्यम् ।

1. यौगिकस्य किं लक्षणम् ? तच्च कतिविधम् ? 17
2. प्रकृतिनिपातयोः कार्यतः कः प्रभेदः ? 17
3. किंतावद् वाक्यस्य लक्षणम् ? 'सुपतिङ्गन्तचयो नैवमतिव्याप्तादिदीवतः' इत्यस्याश्वी विशदयताम् । 17
4. समासशक्तिस्वीकारे की दीधः ? 17
5. किं सार्थकलक्षणं कस्य तस्यार्थः ? 17

**SANSKRIT—GENERAL ESSAY**  
**(History of Sanskrit Literature.)**

**FOURTH PAPER**

**FIRST HALF**

*Examiner*—PT. KOKILESWAR BHATTACHARYA SASTRI, M.A.

*Marks*—50.

1. Write an essay on the Introduction of Alphabet and Writing into India.

*Or,*

Show that there are good grounds for supposing that the races among whom the *five* Pāṇḍava heroes of the Mahābhārata were born and fostered were not completely under the sway of the Brahmanical Law.

*Or,*

Write an essay, showing the relation between the कृति, कृति and कल्पसूत्र.

*Or,*

Mention some of the most striking episodes contained in the Mahābhārata and the Rāmāyana.

*Or,*

Write what you know of Hindu Sculptures and Paintings, stating their special characteristics.

**SECOND HALF**

*Examiner*—DR. SATKARI MOOKERJEE, M.A., PH.D.

*The figures in the margin indicate full marks.*

Write an essay on *any one* of the following subjects:— 50

(a) Give a constructive survey of the philosophy of life as adumbrated in the works of Kālidāsa and Bhavabhūti, laying stress on the ethical, sociological, and religious elements and the relation of man and woman and of both to the world of Nature.

*Or,*

The place of the Dhvani School in the Alankāra literature, its origin and development and the contributions made by the philosophical speculations of diverse schools of thought to the development of the discipline.

(b) The Sacrificial religion in the Saṁhitā and the Brāhmaṇa period and show that the transition from Vedic religion to the philosophical religion of the Upaniṣads was a natural process.

*Or,*

Give a running survey of the philosophical speculations in the Upaniṣads, laying special stress on the status of the individual souls, the phenomenal world, and Godhead in their mutual relations.

(c) A critical estimate of the *pramāṇas* in Mīmāṃsā system of thought.



Or,

The influence of Smṛti literature on the evolution of social life in India with an appraisal of the orthodox and modern historical methods of interpretation and their relative merits and drawbacks.

(d) Trace the origin and development of the doctrine of Māyā-Avidyā, and adduce evidence in support of the position you adopt regarding the question whether the doctrine is an exotic implantation or a natural derivation from Vedic sources.

Or,

The Epistemology of the Śāṅkhya school of Vedānta as developed in the *Vedānta-Paribhāṣā*, incidentally discussing the possibilities of other theories of knowledge in consonance with the fundamental position of the school.

(e) Discuss the Psycho-metaphysical basis of Patañjali's Yogic discipline as adumbrated in the Sūtras and its affiliation to the Sāṅkhya system of thought, and give a rational interpretation of its far-reaching influence on all schools of religion, though professing divergent philosophical views.

Or,

Give a critical evaluation of the Sāṅkhya categories (*Tattvas*) and the psycho-philosophical necessity underlying the order of evolution, and discuss the true significance of the omission of God in orthodox Sāṅkhya and its inclusion in the sister school of Yoga.

(f) Nyāya as a system of Logic and Epistemology.

Or,

The adequacy of Vaiśeṣika categories and the significance of the later fusion of Vaiśeṣika metaphysics with the Nyāya epistemology.

(g) A critical evaluation of the theories of soul in Sāṅkhya, Vedānta, and Nyāya.

Or,

The theories of illusion in Nyāya and Vedānta systems of thought and give reasons of your preference, if any, for any one of them, and show their relevancy to the particular metaphysics to which they are affiliated.

(h) The influence of Prākṛta dialects on the Modern languages of India.

Or,

The growth and development of Prākṛta prose and poetry and their place in Indian literature.

(i) The value of inscriptions and numismatics for a reconstruction of the history of India. Support your contentions with apt quotations and references.

Or,

Give a constructive survey of the social history of India during the Gupta period on the basis of inscriptional and numismatic evidence and the confirmation of the same from contemporary literature wherever feasible.

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(GROUP A)

FIFTH PAPER

FIRST HALF

Examiner—PT. KRISHNAPADA VIDYARATNA

*The figures in the margin indicate full marks.*

1. *Either,* 8  
Write in Sanskrit a short thesis on one of the following extracts:—

“अर्जुनविगतगुणधरणाः

पटनी न दीपमखिलं खलुत्तमाः ।”

“त्यजन्त्यसूयं शर्म च मानिनी वरं

त्यजन्ति न त्वेकमयाचितव्रतम् ।”

Or,

Give a short analysis *either* of the Canto XIV in Śisupālābadham *or*,  
of the Canto XVII in Naiṣadhiyācharitam.

2. Give in Sanskrit the synonyms for the following *eight* words, and  
derive them and give their English equivalents:— 12

जनङ्गमः, प्रतिघः, भुजिष्, सरकम्, अपास्य, विषाणम्, अभिधित्तः, सादिः, नासीरं,  
and अविभयुः ।

3. Explain fully in Sanskrit after Mallinātha *any four* of the following  
verses with reference to the contexts, giving important grammatical notes and  
allusion where necessary:— 15

(1) यद्योद्धमानः खलु भोगभोगिना

प्रसङ्गं वेरोचनिजस्य पत्नयम् ।

विदर्भजाया मदनस्तथा मनी-

गलावरुहं वयसैव वेष्टितः ॥

(2) विधाय मूर्तिं कपटेन वामनीं

स्वयं बलिष्ठां सिविडम्बिनीमयम् ।

उपेतपार्श्वशरणेन मीनिना

कृपः पतङ्गं समधत्त पाणिना ॥

(3) इत्यममुं विलपन्मममुखम्

दीनदयालुतयावनिपातः ।

रूपमदर्शि धृतीऽसि यदर्थं

गच्छ यद्विष्णुमधेत्यभिधाव ॥

- (4) तोषमेति वितथेः क्षवेः पर-  
 क्षे च तस्य सूक्ष्मः श्रुतिरिति ।  
 क्षति नः स्तुतिक्रमेऽस्तु तव  
 क्षीयत्येव न च तेन तुष्यसि ॥
- (5) अथ क्षेप सकलीऽपि भति मां  
 प्रत्यक्षेण गुणवन्तुरिति ।  
 भूमिदेव नरदेव सङ्गमे  
 पूर्वदेवरिपु रक्षणां हरिः ॥
- (6) धन्योऽसि यस्य हरिरेव समक्ष एव  
 दूरादपि क्रतुषु यज्वभिरिव्यते यः ।  
 दत्तार्धमवभवते भुवनेषु यावत्-  
 संसारमखलमवाप्नुहि साधुवादम् ॥
- (7) अतिरक्तभावमुपगम्य  
 कृतमतिरमुष्य साहसि ।  
 दृष्टिरगणितभयाखिलता-  
 मवलम्बते अ समया सखीमिव ॥
- (8) अथवा न धर्ममसुबोध-  
 समयमवयात बालिशाः ।  
 काममयमिह वथापलितो  
 हतबुद्धिरप्रणिहितः सरिस्तुतः ॥
- (9) अचिरान्मया सह गतस्य  
 समरमुरगारिलक्षणः ।  
 तीक्ष्णविशिष्टमुखपीतमखक्  
 पतताङ्गणैः पिबत् सार्धं मुर्वरा ॥
- (10) तव स्वधर्मरेलम्भि भुवः शीर्षेणैव सा ।  
 जगती श्रौक्षु युष्माभिर्लामस्तुत्याम एव वः ॥

4. Give in Sanskrit the substance *either* of (8) or (10), and translate into English (7) with reference to the context. What are the metres ( **छन्दः** ) in (3) and (8) ? Can you name the figures of speech ( **अलङ्कार** ) in (2), (4), (5), (7), and (10) ?

SECOND HALF

Examiner—DR. RAHBAGOBINDA BASAK, M.A., PH.D.

Answer ANY TWO out of the first three questions, and also the FOURTH and the FIFTH ones.

1. Draw, in the manner of the author of the *Mahābhārata*, a clear picture of anarchy in the society, if there were no king to exercise his protective power over its people. Discuss the view that there ~~must~~ be a royal power to offer protection. 8

Or,

We read in the Kauṭilya *Arthśāstra* the following :— 8

“तौल्यदण्डो हि भूतानामनुजेजनीयः । नदुदण्डः परिभूयते । यद्यर्हदण्डः पूज्यः ।”

Have you read anything conveying a similar idea in the Rājadharmā discourses in the *Mahābhārata*? If so, state it clearly.

2. Write a discourse on the generally accepted scheme of Statal circle (राजमण्डल) as you read in the *Kāmandakiya Nitisāra*. 8

3. What do you understand by the terms धर्मयुद्ध and कूटयुद्ध as used by Śukra? Who, amongst enemies, should be immune from slaughter in a battled-field, according to him? 8

4. Fully annotate any three of the following maxims :— 9

- (i) अहमेतन्महद्राज्ये धनिनी नाम भारत ।
- (ii) वत्सापेक्षो दुर्दृष्टो व सनाथैव न कुड्येत् ।
- (iii) असदभ्यस्य समादद्यात् सदभ्यस्तु प्रतिपादयेत् ।
- (iv) भवितव्यं सदा राज्ञा गर्भिणी सङ्घर्षिणा ।
- (v) न हि स्वमस्ति शूद्रस्य भर्तृ हार्यधनो हि सः ।

Or,

Explain fully any three of the following passages :— 9

- (a) शत्रुसंबन्धिनी ये ये भिन्ना मन्निगणादयः ।  
नृपदुर्गुणतो नित्यं हतमाना गणाधिकाः ।  
स्वकार्यसाधका ये तु सुश्रुत्याः पोषयेच्च तान् ॥
- (b) बह्वर्णमैकमर्त्यं हि नृपतेर्बलवत्तरम् ।  
बहुसुल्लङ्घतो रज्जुः सिंहायाकर्षणचमः ॥
- (c) अष्टशास्त्रं चतुर्भूलं षट्पदं षडे स्थितम् ।  
षट्पुष्पं त्रिफलं षड् यो ज्ञानाति स नीतिवित् ॥

(d) सुवृद्धं तथा राज्यमात्मनः कौरिमेव च ।

इति सन्नेहदीक्षास्यं को हि कुर्यादशान्तिः ॥

(e) समाक्रान्तो बलवता काङ्क्षन्तश्चिन्तितं श्रियम् ।

अथेत चेत्तस्यैव न भोजनं कदाचन ॥

(f) विभीषणस्य सोदर्यस्य सूर्यसुतस्य च ।

सर्वतन्मापहरित्वा तथोच्छेद्यो निजो रिपुः ॥

5. Translate into idiomatic Sanskrit the following passages :— 25

(a) Of the polity which we have outlined, the only polity approved by Indian science, the key-stone was the sovereign. Even in the Vedic age the prevailing system was monarchical. Nevertheless the Vedas afford evidence of tribes in which the chief authority was exercised by a family, or even, as in the case of the German nation described in the work of Tacitus, by a whole body of nobles, who are actually designated kings.

(b) In the monarchies the king controls the whole administration, and by his spies keeps watch upon every part of it. He is recommended to check his officials by division and frequent change of functions. Nevertheless, the Indian king is no sultan with the sole obligation of satisfying his personal caprice. The origin of royalty is the growth of wickedness and the necessity of chastisement, the virtue of which the Indian writers celebrate with a real enthusiasm.

#### (GROUP A)

#### SIXTH PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

*Examiner—MR. DEBENDRANATH RAY, M.A.*

1. (a) Bhāsa's *Chārudattam* is the prototype of Sudraka's *Mṛchchhakaṭikam*. Fully discuss the question. 7

(b) Describe in Sanskrit the trial scene in the *Mṛchchhakaṭikam*. 7

*Or,*

Explain in Sanskrit, using the context :—

विचिन्तयन्तीतस्त्वं चतुर्विधमागतः ।

अपि प्राधान्यं ज्ञात्वा न तु त्वां वरणागतम् ॥

2. (a) What do you think to be the source of the *Vikramorvaśīyam* ? 6

(b) Describe the character of Queen Auśīnarī. 6

3. (a) Who is the author of the Karpūramañjarī? Describe him as a man of letters. 5

(b) Determine, by a reference to the internal as well as the external evidence, the date of composition of the Karpūramañjarī. 6

Or,

Explain fully what is meant by 'The Karpūramañjarī' is a Saṭṭaka (सट्क ).

4. (a) In what respects is the play Venisamhāram original? 5

(b) Translate into English, using the context, the following slokas, and point out the figures of speech contained in them:— 8

- (i) कौरव्यवशदवेऽखिन् क एष शलभायते ।  
बल्लवेणीं स्पृशन्नेनां कृष्णां धूम्रशिखानिव ॥ •
- (ii) स्त्रीणां हि साहचर्याद् भवन्ति चेतांसि भर्तृसदृशानि ।  
मधुराणि हि मूर्च्छयन्ते विषविटपिसमाश्रिता बल्लो ॥

## SECOND HALF

Examiner—PROF. VIDHUSEKHAR SANTRI

1. (i) Give a short literary estimate of Bhavabhūti's *Mālatīmādhava*. 7

Or,

Write a note on Bhavabhūti's power of characterization with reference to his *Mālatīmādhava*.

(ii) Rewrite one of the following two stanzas, in your own simple Sanskrit, avoiding compounds of more than two words:— 5

- (a) उत्कल्योत्कल्य कृत्तिं प्रथममथपृथस्तेषुभूयांसि मांसा-  
न्यसंस्मिकपृष्ठपिण्डाद्यवयवसुलभाभ्युपपूतानि जग्ध्वा ।  
आतन्नायवन्नेवः प्रकटितदशनः प्रतरङ्गः कण्ठा-  
दङ्गस्यादस्थिसंस्थं स्पृष्टगतमपि कव्यमव्ययमस्ति ॥

- (b) उत्फुल्लान्सर्जवासितवह्न्यैरकाभक्रान्तबन्-  
प्रेङ्गोलस्रसितेन्दनीलश्रकलकिण्वाभुदयेणयः ।  
धारासिक्तवसुन्धरासुरभयः प्रासाक्त एतेऽधुना  
धर्माभिविगमागमव्यतिकर-श्रीवाहिनी वासराः ॥

2. Render into Sanskrit either (a) or (b), and name the dialect in which it is composed, noting its characteristics according to your text:— 18

(a) षडि षडि सो क्लु. उज्जायवाडोवणिगमादो जेव कलचलं सुचिच साचिकेवं  
दूरचिकेवाविहविचडोददक्षिणुरं पधाविच पराणीचं पविडि। तदी पडिचिउत्तन्दि  
मन्दभाइणी। सुणामिं च घरे घरे गुणाशुराचिभरख पडरलोचख हा महाणभाव माइव  
मवरन्द हा साइसिच पि परिदेवणाचो। महाराचो वि मनिचोपाचं विपलश्वतुत्तल सुचिच  
संजादमच्छराधिकेवो तक्खणविख्विदाणेचपोठपाइक्खिवही चन्दादवेण सीइसिहरडिदी पेक्खदि।

(b) परमत्ववह्नि पिचसहि लवङ्गए एसा दाणिं दे पियसही चणाचां मरवे वट्टमाणा  
आगभणिगमणिरन्तरोवञ्ज आरोवउडवोसभसरिं परिच्छइच पत्थेदि जइ दे चइं चखवट्टणीचा  
तदी मं हिचएण धारयन्ती समगसीइगलच्छोपरिग्गइक्कमक्कलं माइवसिरीणो सुहारविन्दं  
आणन्दमसिचं अवलीचक्खसि।

3. Translate into Sanskrit:—

25

'Does it not seem after all,' he says, 'as if this Smṛiti hardly deserved a commentary of its own, in as much as it is difficult to make out on what grounds it claims any authority? For if we appeal to a Sūtra of Jaimini where he has proved that the Veda possesses an authority irrespective of anything else, these arguments can hardly apply to books which are evidently the work of men, and entirely dependent on the authority of other sources. These sources again, if they be considered as the life and strength of that authority, are often very indistinct. First, they could never fall under the cognizance of the senses, because the very nature of duty or law is transcendental. Nor can this ultimate reason or source be found in induction, in as much as induction is only possible after observation. Neither can it be looked for in the sayings of other men, because man is exposed to error, and cannot even express things as he has really perceived them. But even if man was free from error, there would always be room for doubt and opposition.'

(GROUP A)

## SEVENTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

Examiner—Pt. HARGOVIND DAS SETH

1. वासवदत्तायाः कर्तुः सत्तासमर्थं सम्भवालोचनापूर्वकं विनिर्दिष्टम् । 15

2. निम्नीतृ तयोः प्रवन्धयोरन्यतरं विप्रदतया व्याख्याहि :— 20

(a) तस्य च पारिजात उवाशितमन्दः, हिमालय इव अनितशिवः, मन्दर इव भोगिभोगहितः, कैलास इव महेश्वरोपभुक्तकीटः, मधुरिव जामागमानन्दकरः, चोरोदमघनीयत

मन्दर इव मुखरितेभुवनः, रातरञ्जुरिवीक्षाक्षितरतिः, ईशानभूतिर्धन इव सन्धीच्छलितः, शरत्नेत्र  
ज्वावदातद्वयः, विष्णुपदावलम्बी च, पौर्य इव समरक्षादधीक्षितः, कंस इव कुबलयापीडभूषितः,  
सार्वभ्य इव विगतानन्दकरः, सुमुखनन्दनश्च, विष्णुरिव क्रीडीकृतसुतगुः, ब्रह्मणव इव स्ववशस्थापित-  
कालधर्मः, कौरवपुङ्गव इव सुशर्माधिष्ठितः, सुबाहुरपि रामानन्दः, समदृष्टिरपि महेश्वरः, मुक्तामबी-  
ऽप्यतरलमध्यः, जलद इव विमलतरवारिधारामाक्षितराजहंसः, वंशप्रदीपोऽप्यक्षतदशकानयः  
कन्दर्पकैतुर्नाम ।

(b) अस्ति सुधाधवलैः, वृहत्कथारश्मैरिव शालभस्त्रिकोपेतैः, हनेरिव समाधवकक्रोडितैः,  
करियूथैरिव समतवारणैः, सुयीवसंघैरिव सगवाचैः, बलिभवनैरिव सुतलसंनिवेशैर्वैश्वभिरुप-  
शोभितम् ; धनदेनापि प्रचेतसा, अजापासिनापि रामेण, प्रियंवदेनापि पुष्पकैतुना, भरतेनापि  
शमुन्नेन, सिधिरिणाप्यतिधिसत्कारपरेण, असंख्येनापि संख्यावता, अमर्शमेदिनापि वीरतरेण  
अपतितेनापि नानासवासक्तेन, सुदर्शनेनाप्यचक्रेण, अजातमेदिनापि सुप्रतीकेन, अपचपातिनापि  
हंसेन, अविदितस्त्रेहचयेणापि कुलप्रदीपेन, अयन्यापि वंशपीतेन, निदाघदिवसेनेव वर्षाविवर्धित-  
रुचिना, माघविरामदिवसेनेव तपस्यारम्भिणा, अयह्नेणापि काव्यजीवनेन पौरजनेनानुगतं.....  
कुसुमपुरं नाम नगरम् ।

### 3. आङ्ग्ल भाषायामनूयताम्—

15

यस्य च परिसरे सुरासुरमुकुटकुसुमरज्जीराजिपरिमलवाहिनी पितामहकमण्डलुधर्मद्रवधारा  
अतलगतसगरसुतशतसुरनगरमारोहणपुष्करज्जुः, ऐरावतकटकषण्कम्पिततटहरिचन्दनस्यन्दन-  
सुरभितसलिला सलिलसुरसुन्दरीनितम्बबिम्बाक्षिततरलिततरङ्गा, खानावतीर्षसप्तर्षिजटाटवीपरिमल-  
मुखवेणिः, एणतिलकमुकुटजटाजूटविकटकुहरभान्तिजनितसंस्कारतयेव कुटिलावर्त्ता, धरणीव  
सार्वभौमकर स्पर्शोपभोगक्षमा, जलदकालसरसीव गन्धाब्धोपरिधमङ्गमरमालानुमीयमानजलमध्र-  
कुमुदपुष्करौका, कन्दोर्विचित्रिरिव मानिनीसनाथा, हताम्बतमसपि तमसान्विता, वीचिकलिताप्य-  
वीचिदुर्गमा भगवती भागीरथी वदति ।

### SECOND HALF

Examiner—PT. SIBAPRASAD BHATTACHARYYA, M.A.

1. Orthodox tradition regards Bāṇa's *Harṣacharita* as an *Ākhyāyikā*, which is described as आख्यायिकोपलब्धार्था, while modern scholars call it a prose romance. Utilize your acquaintance with the work to justify both of these characterizations.

7

Or,

Note the salient points in (i) Bāṇa's description of the city of Sthānviśvara on the eve of King Prabhākara-vardhana's death, and in (ii) Rājyavardhana's appeal to Harṣavardhana to assume the reins of royalty.



2. Note the context in and the pertinence of the following passages :—5

- (i) वस, विश्वानां यशसा स्यात्तुमिच्छामि लोके न वपुषा ।  
 (ii) अनार्यश्च तं मुक्ता भागीरथीकेनपटलपाशुराः केषां मनःसु सरःसु राजहंसा इव परशुरामपराक्रमश्रुतिक्लृता न कुर्व्युरार्यशीर्यगुणाः पचपातम् ।

Or,

Give apt renderings of the following words, adding notes where necessary :—

कुलपुत्रक, स्नायुवार, महाभायूरी, मस्करिन्, पञ्चजन, कुवैकटिक, यमपट्टिक, दुःखासिका ।

3. Explain (i) in *śūkhā* form, and give a readable running English rendering of (ii) or (iii) :— 5 + 5 = 10

(i) अकाण्डे खल्वयं समुपस्थितो महाप्रलयो व्यथ इव वज्रपातः । सामान्योऽपि तावच्छोकः सीच्छासं मरणम् अनुपदिष्टोऽपि महाव्याधिः अभव्योकरणीऽग्निप्रवेशः अनुपरतस्यैव नरकवासः । निर्व्योतिरङ्गारवर्धमव्रणी वज्रसूचीपातः, किमुत विशेषाशितः ।

(ii) अष्टभासि तप्तकालायसकृन्धबभूवि भानुभङ्गले भयङ्करकवचकायव्याजिन कीऽपि पार्थिवप्राणितार्थो पुरुषोपहारमिवोपजहार । ज्वलितपरिवेशमखलाभोगभास्वरो जिहृष्याञ्जुभाण-स्वर्भानुभयादुपरचिताग्निप्राकार इव प्रत्यदृश्यत श्वेतभानुः ।

(iii) यदि बाल इति नितरां तर्हि न त्याज्योऽस्मि रक्षणीय इति भवद्भुजपञ्जरं रक्षास्थानम् अशक्त इति क्व परीक्षितोऽस्मि अक्षेत्रसङ्घ इति स्त्रीपक्षे निक्षिप्तोऽस्मि. .. कलत्रं रक्षत्विति श्रीले निखिंशेधिवसति पृष्ठतल्लिखति तिष्ठत्येव प्रतापः ... न बाह्याः सहायो मङ्गत इति व्यतिरिक्तमिव मां गणयति प्रलुपपरिकरः प्रयामोति पादरजसीति कीऽतिभारः ।

Note the prominent *alanīkhāra* in (i) and any striking *doṣa* in (i) or (iii). Refer to the context in (iii). 3

Or,

What characteristic of Bāṇa's style is exemplified in (ii) or (iii)? Note the planetary portents referred to in the former and the prevalent beliefs associated therewith.

4. Translate either of the following passages into English :— 25

(i) अनर्थिनः खलु जनस्यावृतमपि निषिध्यमानं प्रायेण परिकल्पते सन्तापय । जायते चोपदेष्टुः पिशाचकिन इवाज्ञातार्थव्यासः कथाप्रयासः । पाथिव्यायमयाथावयोः सूक्तसूत्रासीषु न दृष्यति । रजसानीबह्वलीषु च प्राणिषु प्रथमतरमेव धर्मोपदेशः करोति महर्षी शिरःशूलव्याधौ भवति चावधीरचाय वक्तुः । तदेवमभ्यस्तारसप्रसरैरेव वचोभिरुक्तासयामि । नयवेदिनी हि वनगज इव स्वादुफलप्रसीभनमविदितुत्वे पुंसि कन्दानुवर्त्तनमपि भवत्यायत्यामभिज्ञतावापये ।

(ii) सत्यपि महति युक्तानि या द्येव धर्मस्य नीतिरिव गव्यस्य चान्तिरिव तपसः-  
 चतुर्सेकस्वितिरिव सुतस्य कीर्तिरिव जीवितव्यस्य विजयवैजयन्तीव मनसिजस्य .साकारन्दमञ्जरीव  
 पुष्पाकारस्य कल्पलतेव विदिवद्रुमस्य कल्याणपरम्परेव पुष्पीदयदिवसस्य तस्य महीपतेः प्रणयप्रासादा-  
 विष्ठानभूमिरासीत् । यस्याश्च भर्तुः श्रीविष्णासवयस्येव कीर्तिः प्रसाधनसखीव सागरावरा  
 मनोरथानुचरीव सरस्वती विनीदभुजिष्येव भवन्ती स्त्रीत्वेनैव सापद्यमभजत् न पुनः  
 प्रणयप्रसरखलुनेन ।

(GROUP A)

### EIGHTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

*Examiner—PT. SIBAPRASAD BHATTACHARYA, M.A.*

१ । मन्मटाचार्यः काव्यभेदमभिदधता चित्रपदेन किं तावन्नक्षितम् ? चित्रस्य काव्यभेदे-  
 ऽन्तर्भावः किमप्योजनकः ? काव्यस्वरूपविषयिणी मन्मटसिद्धान्तस्य स विरोधी न वा ? युक्त्युदा-  
 हरणयोरुपन्यासमुखेन स्ववक्तव्यं स्फुटमाविदधितव्यम् । 8

यद्वा,

संलक्ष्यकमव्यङ्ग्यस्य ध्वनेः के पुनस्त्रयो भेदा आदौ दर्शिताः ? एषां परस्परव्यतिरेकित्वे  
 किं तावत् बीजम् ? 8

२ । रससूत्रविवरणप्रसङ्गे भङ्गनायकेन यद्वापारतयमुपन्यस्य लक्ष्यलक्षणसङ्गत्या स्फुटं  
 निरूपणीयं तत् । तत्र व्यक्तिवादिनामरुचौ कारणमुद्भाव्यव्यञ्जनपक्षौ मितेन सारेण च वक्ष्या  
 प्रकाश्याः । 12

यद्वा,

अनौचित्ये रसभङ्गः रसाभासादयोऽप्यनौचित्यप्रवर्तिता इति स्थिते रसाभासादीनां दोषपक्षे  
 निक्षेपो न वा ? 'अपरे तु रसाभासं तिर्यञ्चु प्रवक्षते, तत्र परीक्षाचमम्' । इति विद्याधरमतं  
 विमर्शनीयम् ।

३ । अधोलिखितसन्दर्भयोः एकतरस्याशयो निरूपणीयः—

12

(क) इत्य' संयोगादिभिरर्थान्तराभिधायकत्वे निगारितेऽप्यनेकार्थस्य शब्दस्य यत् क्वचिदर्थो-  
 न्तरप्रतिपादनं तत्र नाभिधा ... न च लक्षणा ... अपि तु व्यञ्जनमेव व्यापारः ।

(ख) न च लक्षणात्मकमेव ध्वनम् ... न च तदनुगतमेव ... न प्रौढानुसार्येव न च शब्दानुसार्येव ... इत्यभिधातात्पर्यलक्षणात्मकस्यापारम्भस्यतिवर्ती ध्वननादिष्वर्थाधी व्यापारीऽनपेक्षणीय एव ।

४ । (क) विद्याधरेण लक्षणाया जहत्स्वार्थाऽजहत्स्वार्थाजहदजहत्स्वार्थाक्रमेण यच्चैविध्यं दर्शितं संज्ञानिर्वचनपुरःसरं प्रत्येकं तस्य स्वरूपं बोधनीयम् । तदनुप्रक्षितानां यथास्मत्प्रकाराणां खोलेखः कार्यः । 12

यथा,

गुणाः शब्दार्थधर्मा रसधर्मा वा इत्यत्र नवीनानां कः सिद्धान्तः ? कथञ्च सः ? स्थिते च तस्मिन् शब्दगुणार्थगुणादिपदार्थां किं तत् प्रतीयते ? “वस्तुतस्तु ... गुणालङ्काराणां समवायवृत्त्या स्थितिरिति गड्डलिकाप्रवाहेण” इति विद्याधरकटाक्षितं निगमय ।

(ख) परिणामालङ्कारलक्षणं निरूप्य तस्येतरालङ्कारव्यतिरेकं समर्थय ।

नरसिंह धरापाल के वधन्तव वर्णने ।

अपि राजानमाक्रम्य यशो यस्य विजृम्भते ॥

इति पद्ये परिणामालङ्कारस्य सम्भवी न वा ? आद्ये कथञ्च सः ?

५ । अधोलिखितच्छन्दसां मध्ये यस्य कस्यचित् विकस्य लक्षणाणि उद्भूयन्ताम्— 6  
शालिनी, रुचिरा वैतालीयम्, शिखरिणी, सङ्घरा ।

## SECOND HALF

Examiner—DR. AMARESWAR THAKUR, M.A., Ph.D.

Answer THREE questions, of which Question 5 must be one.

1. Explain fully :— 12½

(a) नायं ज्ञाप्यः स्वसत्तायां प्रतीयव्यभिचारतः ।

(b) अथैव पुनर्गोशब्देन वाहीकार्यं नाभिधीयते । किन्तु स्वार्थसहचारिगुणसाजात्येन वाहीकार्यगुणा एव लक्ष्यन्ते । तदव्यव्ये न मन्यन्ते ।

(c) नन्वन्तु युगपदेव तात्पर्यशक्त्या विभावादिसंसर्गस्य रसादिषु प्रकाशनम्—इति चेन्न, तयोर्हेतुकलभावाङ्गीकारात् ।

2. (a) Justify the names शैली and चार्दी in connection with उपमा . 2

(b) How has Dhvanikāra's definition of Kāvya been criticized by Viśvanātha ? 2

(c) Define and illustrate अभिधामूलव्यञ्जना . 3

(d) Bring out the difference between प्रतिबन्तूपमा and दृष्टान्त and between दृष्टान्त and चर्चाकरत्वास . 3

(e) Write a note on अविकल्पदत्त, stating when it may be condoned. 2½

3. (a) Refute the theory that व्यङ्ग्यार्थ can be derived from inference. 5

(b) Discuss the rhetorical figures in the following verses :— 7½

(i) पादाङ्गतं यदुत्थाय मूर्धानमधिरोहति ।

स्वस्थादेवापमानेऽपि देहिमसाहरं रजः ॥

(ii) विललाप स वाष्पगद्गदं सहजामप्युवाच धीरताम् ।

अतितममयोऽपि मर्दवं भजते कैव कथा शरीरिणाम् ॥

(iii) मुनिर्जयति योगीन्द्रो महात्माकुम्भसम्भवः ।

येनैकचतुर्लोकं दृष्टो दिव्यो तौ मत्स्यकच्छपौ ॥

4. 'a) यस्य त्रिवर्गशून्यानि दिनाभ्यायानि यानि च । 12½

स लोहकारभस्मेव श्वसन्नपि न जीवति ॥

(b) स्थितः स्थितामुच्चलितः प्रयातां निवेदुमीमांसनं न्वधौरः ।

जलाभिलाषी जलमाददानां कथिव तां भूपतिरन्वगच्छत् ॥

In what connection do these ślokas occur in the Kanthābharana ?  
Write a thesis on the theory of *rasa* as developed by Bhoja.

5. Translate into English :—

25

रक्तप्रजस्य भूभर्तुः पथाङ्गिकानुगच्छनम् ।

तस्याज्ञायि जनैर्धौतचौमचालनसन्निभम् ॥

स पुनर्बोधिसत्त्वानामपि सत्त्वानुकम्पिनाम् ।

चर्यामुदात्तचरितैरव्यथित महाशयः ॥

तस्याभिवेक एवाज्ञां धारयन्तोऽधिकारिणः ।

सर्व्वेती मारमर्थ्यादा पटङ्गानुदघीबयन् ॥

कल्याणिना प्राणिवधे तेन राष्ट्राभिचारिते

निष्पापां प्रापिता इति स्वकीयाच्छौनिकादयः ॥

तस्य राज्ये जिनस्येव मारविधेविषः प्रभोः ।

क्रतौ वृत्तपशुः पिष्टपशुर्भूतबलावभूत् ॥

अर्ध्वाङ्गालोद्भवस्यापि राज्यकालोऽस्य भूपतेः ।

अङ्गतादिदृष्टोदन्तेर्वात्सल्यदभुतोऽभवत् ॥

स बहिर्विहरन् जातु भूषद भीतैरुदोरितम् ।

चौरचौरीत्यभिव्यागदश्वणीत् क्रान्दितध्वनिम् ॥

कः कीदृक् बध्यतां चौर इत्युक्ते तेन सङ्गुधा ।

अशमाक्रान्दितध्वानी न च चीगे व्यभाव्यत ॥

## (GROUP B)

## FIFTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner—MM. PT. SITARAM SASTRI*

*Answer ANY FIVE of the following questions.*

1 निघण्टुर्थात्कृतो वा अन्यस्यादिती वेति माधकवाधकप्रमाणीपन्यासपरस्परं विचारणीयम् । 10

2 नास्मात्स्यातजलमिति मतं सहेतुकं विलिख्य तदभाववाटिमतेन सप्रमाणं सिद्धान्तं प्रदर्शयताम् । 10

3. व्याकरणेन निरुक्तस्यागतार्थत्वं प्रवृत्तपक्षीपन्यासपरस्परं सहेतुकं विलिख्यताम् । 10

4 निर्वचनप्रकारः सोढाहरणी निरुपणीयो निरुक्तदिशा । 10

5. इमिणः । जसुरिः । पड्भिः । आघृणिः । अग्निगः । गभ्यम् । प्रकलवित् । अमूरः । जारयायि । गलदया । दनः । उत्तम् । 10

एषां पदानां मध्ये दशानां निरुक्तरीत्या निर्वचनप्रदर्शनपरस्परमर्था वक्तव्याः ।

6. देवतानां पुरुषविधत्वं सहेतुकमुपन्यस्य तदभावसिद्धान्तं समर्थयताम् । 10

7 वेदे कथ्यमानदेवतानां सङ्गाविषये नानासतान्द्युपन्यस्य निरुक्तसङ्गतं सिद्धान्तं सम्प्रदर्शय-  
दित्यस्य भक्तिर्नर्मसंस्तवा विविच्य प्रदर्शनीयाः । 10

8. प्रा॒वि॒पामा॑ वृ॒हती॑ मा॒दयन्ति॑ प्र॒वति॒जा इ॒रिणे॑ व॒र्त॑तानाः ।

मी॒म॒स्येव॑ मी॒श॒व॒तस्य॑ भ॒क्षी॑ वि॒भी॒द॒को जा॒गृ॒विर्म॑च्छा॒म॒च्छा॒न् ॥ 10

यथानिरुक्तमेतस्य व्याख्यां प्रदर्श्य, निरुक्ते कासांचन देवतानां कालनिर्देशतामर्थं विस्पष्टं प्रतिपादयताम् ।

## SECOND HALF

*Examiner—PROF. VIDYUSEKHAR SASTRI*

1. (i) What is a *Prātisākhya*? Why is it so called? 10

(ii) Are the *Prātisākhyas* included in the *Vedāṅgas*? If so, in which of them, and how is it so?

(iii) Why is it that the title *Pārśada* is frequently applied to the *Prātisākhyas*?

(iv) Is there any subject or subjects in the *Prātisākhya*, and specially in the *Ṛkprātisākhya*, that are discussed also in other works? If so, what are those subjects?

(v) Name the works in which Vedic metres are discussed.

2. (i) Explain, giving examples, any one of the following :— 20

(a) परुषे पे भीषा पथेत्यकार

एवं अप्रिमिषु सा ऋतोपधा ।

सचादयो या विहिता विवचयः

ऋतोपधान्ता अनुनासिकोपधाः ॥

(b) मेधातियो वरुणान्त्रतान्ता

स्यर्शान्तःस्थाप्रत्ययौ निरुंसेते ।

आदित्या देवा वरुणासुरेति

येत्यादिषु वयमित्यत्र मिवाः ॥

(ii) Explain and illustrate any two of the following *Sandhis* :—

(a) *Śaudhūkṣara*, (b) *anvakṣara*, (c) *sparsarepha*, and (d) *vikrānta*.

(iii) Write a note on diphthongs according to the *Ṛkprātisākhya*.

Or,

Explain :—

वायुः प्राणः कीदृमनुप्रदाभं कण्डस्य खे विवते रुंते वा ।

आपद्यते आसतां नादतां वा वक्त्रौहायामुभयं बान्तरोभौ ॥

ता वर्णानां प्रतयो भवन्ति

आसोऽघोषाणामितरेषां तु नादः ।

सोमोभयं घोषिणां आसनादौ

तेषां स्थानं प्रति नादात् तदुक्तम् ॥

3. (i) What is the main difference between a Vedic and a classic metre? 20

(ii) As regards Vedic metres is there any restriction to the number of *pādas*? Discuss.

Or,

Name the metre of the following from the *R̥gveda*, and discuss whether it can be regarded as a complete stanza :—

āsiknyām yājamano ná hótā.

(iii) Write the varieties and give the scheme of *Gāyatrī*.

(iv) Discuss whether all the classical metres are based on the Vedic ones.

Or,

Write the divisions and sub-divisions of classical metres, giving examples.

## (GROUP B)

## SIXTH PAPER

## FIRST HALF

Examiner—P<sup>r</sup>. LAKSHMINARAYAN CHATTERJEE VEDASASTRI, M.A.

The questions are of equal value.

Full Marks—75

Attempt ANY FIVE questions

1. ब्राह्मणचरणं तावत् किम् ? ऐतरेयस्ये ग्रन्थे तल्लक्षणं संक्षेपम् । “ब्राह्मणानीति-  
हासान् पुराणानि कल्पान् गाथा नारायणीः” इति श्रुतौ इतिहासादीनां श्रवणेन ब्राह्मणलक्षण-  
स्यातिव्याप्तिः कथं वारणीया ? इतिहासादयो व्याख्यायन्ताम् ऐतरेयस्यास्ते च प्रदर्शयन्ताम् ।

## अथवा

“तद् यदेवाव प्रयाजान् यजन्ति नानुयाजास्तव स काम उपामौ योऽनुयाजेषु” —  
व्याख्यायतामयं ग्रन्थः । आतिथ्यां प्रयाजानुयाजानां प्रकृतत्वापकृतत्वमुद्घाटनीयम् । प्रायणीया-  
तिथ्ययोः समामौ सोमावकानां श्रृङ्खिज्ञानत्यविचारः सम्यक् प्रदर्शनीयः साधयौकदिश ।

2. “ता एता नवानुनायमन्वाह द्विनीता ना अप्वरं देवयज्येति दशमीमावर्तततौरध न  
विधारा इत्याहतास्तेकधनासु प्रति यदापी—अदृशमायतीरिति प्रतिदृश्यमानास्त्रा घ्नन्वः पयसा तूख्यर्था  
इत्युपायतीषु समन्वा यन्तुपयन्तान्वा इति समायतीषु” । उद्घृतयज्यस्य बोधनाय प्रथमं तावद्  
वाक्यार्थद्विक्रानि ( Punctuations ) दीयन्ताम् ; ततो ग्रन्थस्या ऋगंशाः पृथक् पृथक्  
प्रदर्शनीयाः ; तत उच्यताम् उद्घृता ऋचः समानसूक्तान्तर्गता उत विभिन्नसूक्तगता इति ; ततः  
समर्थो ग्रन्थः प्रकृतमनुसृत्य भाष्यानुसारेण सम्यग् व्याख्यायताम् ; अधोरेखपदस्य आशय  
आविष्कृत्यताम् ; प्रथमपठस्य मन्त्रस्य ऋचिः कः ? अस्ति चेत् किञ्चिदुपाख्यानं तत्सम्बन्धि  
तदप्युपन्यस्यताम् ।

3. “प्रजापतिर्वा इदमेक एवाय आस सोऽकामयत प्रजायिष्य भूयान्त्वामिति स तपोऽतप्यत  
स वाचमयच्छत् स संवत्सरस्य परस्ताद् व्याहरद् द्वादशकृत्वो द्वादशपदा वा एषा निविदिता वाव तां  
निविद् व्याहरतां सर्वाणि भूतान्त्वमनुज्यन्त ।”

निवित्पदानि स्वरूपत उल्लिख्य तानि व्याख्यायन्ताम् । निविद् आज्यशस्त्रस्य एकं पर्वः ;  
के चान्ये पर्वण्यौ ? कथं तयोर्विधानं ब्राह्मणग्रन्थे आकातम् ? निविदः नामान्तरमस्ति चेत्  
तल्लिख्यतां सुव्याख्यातम् । सवनभेदेन निविदां स्थापनभेदः प्रदर्शयतां पाठशैली च निर्दिश्यताम् ।  
निविदां संसंकाय किं दीयते ?

६. ४. व वै वीक्ष्यो नाम वक्ष्यतीति तैत्तिरीयाः। वीक्ष्यो स्वतन्त्रः क्रतुर्न वा ? कथं वीक्ष्यो निष्पाद्यः ? कथमेतस्य नाम वीक्ष्यतीति ? अत्र गानं विद्वतमविद्वतं वा ? किं नाम विद्वत्पक्षरूपम् ? गानस्य विद्वतत्वेऽविद्वतत्वे वा किं साम ? सामुक्त्यानामकरणे किं मूलम् ? एतत् सर्वं भाष्यकारकमुक्त्यै स्वमनीषया वा उच्यताम्।

5. द्वादशाहः कतिविधः ? भेदानां नामकरणे किं मूलम् ? द्वादशाहे कदा दीक्षा ? द्वादशाहे कर्त्तव्या यागाः सामान्यतो यथाक्रममुक्तेऽस्या दशमदिननिष्पादो यागस्तु विशेषतो वर्षनीयः।

6. “कतिमर्शमेव विद्वरेत्तया वै प्रगाथाः कल्पने प्रगाथा वै बालद्विष्टास्तत्कालादतिमर्शमेव विद्वरेद् यदेवातिमर्शं ३।”

एवकारस्य सार्थक्यं प्रदर्श्य गन्धः सम्यग् व्याख्यायताम्। मीमांसकस्य शिल्पशस्त्रस्य कियदर्शी विद्वत्पक्षोदाहरणत्वेन प्रदर्श्यताम्।

7. अधस्तानामर्थान् लिख्यताम् :—

चौपयस्यम्, पूतभृत्, चमः, ऐतग्रप्रलापः, अतिवादः, देवनीधः, सप्तातसूक्तम्, अथर्वः, गृह्यः, हन्दीमः॥

## SECOND HALF

Examiner—Pt. BANAMALI CHAKRABARTI VEDANTATIRTHA, M.A.

*The figures in the margin indicate full marks.*

Translate into simple classical Sanskrit (a) or (b); and (c) or (d); and (e), adding notes wherever necessary to make your translation intelligible :—

8+8+9

(a) मन्वे ह वै प्रातः। अग्नेग्यमुदकमाजु र्यथेदं पाणिभ्यामवनेजनायाहरन्त्येवं तस्यावनेजानस्य मन्त्रः पाणीऽ आपेदे। सद्वाद्ये वाचमुवाच बिभृक्षे मा पारयिष्यामि त्वेति कक्षान्मा पारयिष्यसीत्यौघ इमाः सर्वाः प्रजा निर्वोटा ततस्त्वा पारयितासीति कथं ते भृतिरिति। स होवाच यावदे क्षुत्तका भवामी वक्षी वै नस्तावन्नाष्ट्रा भवन्त्युत मन्त्र एव मन्त्रं गिलति कुम्भां मा ये विभरासि स यदा तामतिवर्धाऽ अथ कर्षू खात्वा तस्यां मा विभरासि स यदा ता मतिवर्धाऽ अथ मा समुद्रमभ्यवहरासि तर्हि वा अतिनाष्ट्रो भवितासीति।

(b) इन्द्रो ह यत्र इवाय वज्रं प्रजह्वर। सोऽवधीयान् मन्त्रमानौ नास्त्वधीतीव बिभ्रन्निलयाचक्रे स पराः परावती अगम देवा ह वै विदांचक्षुर्हती वै इमोऽ धेन्वी न्वसीदेति।



तमग्नेष्टुं दधिरि । अग्निं देवतानां हिरेण्यसुप ऋषीणां वृद्धीं छन्दसां तमग्निं नृविषेद  
 तेनैतां रात्रिं सहाजगाम स वै देवानां वसुर्वीरिं ज्ञेयाम् । ते देवा अश्ववन् जना वै  
 नीदय वसु र्वसति यो नः प्रावाक्षीदिति ताभ्यामेतदयथा ज्ञातिभ्यां वा सुखिभ्यां वा  
 सहागताभ्यां समान मोदनं पचेदजं वा उदह मानुषं हवि देवानामिव ताभ्यामेतत्समानं  
 हविर्निर्वपन्नैन्द्राग्रं हादशकपालं पुरोडाशं तच्चादैन्द्राग्रो हादशकपालः पुरोडाशी भवति ।

(c) या ते रुद्र शिवातनूरघोराऽपापकाग्निनी ।

तथा नक्षन्वा शन्तमया गिरिशन्ताभिचाकशीहि ॥

यामिधुं गिरिशन्त हस्ते बिभर्ष्य कवे ।

शिवां गित्ति तां कुरु मा हिंसीः पुरुषं जगत् ॥

शिवेन वचसा त्वा गिरिशदृष्ट्वा वदामसि ।

यथा नः सर्वमिदञ्जगदयच्छां सुमना असत् ।

(d) संसमिद्युवसे हवन्नग्ने विश्वान्यथा ।

इलस्यदे समिध्यसे स नी वसुन्वा भर ॥

सं गच्छध्वं सं वदध्वं सं वो मनांसि जानतां ।

देवा भर्गं यथा पूर्वं संजानाना उपासते ॥

समानो मन्त्रः समितिः समानी समानं मनः स इ चित्तमेवां ।

समानं भद्रमभि सं दधे वः समानेन वो हविषा जुहोमि ॥

(e) विश्वे देवाः शासन मा यथेह ज्ञाता इती मनवै यन्निष द

प्र मे द्रुत भागधेयं यथा वो येन पथा हव्यमा वो वज्रानि ॥

अहं हीता न्यसौदं यजौ यान् विन्ने देवा मृदतो मा कुर्वति ।

अहरहरन्निनाध्वर्यवं वा ब्रह्मा समिन्नवति साहुति वां ॥

अयं यो हीता किरु स यमस्य कमप्यूहे यत् समंजति देवाः

अहरह जायते मासिमास्यया देवा दधिरि हव्यवाहं ॥

(GROUP B) •

### SEVENTH PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

Examiner—MM. PT. PRAMATHIANATH TARKABHUSHAN

Full Marks—75.

ये केचन पञ्च प्रश्नाः समाधेयाः ।

1. “यी वै भूमा तदस्य तदस्य तन्मर्त्यं स भगवः कश्चिन् प्रतिष्ठित इति स्वे महिम्नि यदि वा न महिम्नीति । गो अश्वमिह महिमेत्याचक्षते, इक्षिहिरण्यं दासभार्य्यं शेवाष्यायतनानीति माहमेवं ब्रवीमि ब्रवीमि इति शेवाचाच्यौ ह्यन्यस्मिन् प्रतिष्ठित इति ।” सोपक्रमनिर्देशमस्याः स्तुतेर्भगवत्पादीय-भाष्यमनुसृत्य विस्पष्टतया तात्पर्य्यं प्रतिपाद्यताम् । 15

2. “आरामस्य पश्यन्ति न तं पश्यति कश्चनेति । तं नायतं बोधयेदित्याहुः । दुर्विषयं हास्यं भवति यमेष न प्रतिपद्यते । अथो खल्वाहुर्जागरितदेश एवास्मैव इति यानि हेतव जायन्त पश्यति तानि सुप्त इति ।” 15

किमत्र प्रकान्तमिति निर्दिष्ट्या भगवत्पादीय-भाष्यानुसारेण इयं स्तुतिर्व्याख्यायताम् ।

3. “नन्वस्य लोकस्य मावोपादानं कृतं कथं तस्मिन्नसति अवायं पुरुषः स्वयं ज्योतिर्भवतीत्युच्यते । नैष दोषः विषयभूतमेव हि तत् । तेनैव चावायं पुरुषः स्वयं ज्योतिर्दर्शयितुं शक्यः । नत्वन्यथाऽसति विषये । यदा सा भावासनात्मिका-विषयभूतीपलभ्यमाना तदा असिः कीषादिव निष्कृष्टः सर्वसंसर्गरहितं चक्षुरादिकार्य्यकारणव्यावृत्तस्वरूपमनुमद्गतात्मज्योतिः स्वेन रूपेणावभासयद् गृह्यते ।” इति— 15

किमवोपकान्तमिति सम्बद्धं निर्दिष्ट्या भाष्यमिदं वैशद्येन व्याख्येयम् ।

4. 'तत्त्वमसी'तिमहावाक्यस्य आदित्यो ब्रह्मेत्यादिवचनैलक्षणं छान्दोग्यभगवत्पादीय-  
भाष्योक्तदिशा सयुक्तिकं व्यवस्थाप्यताम् । 15

5. सगुणविद्याफलभूताया मूर्धन्याया नाद्या गतः प्रकारं भगवत्पादीय-भाष्यसरणिमनुसृत्य  
विस्पष्टतया प्रतिपादय । 15

6. "आचार्यवान् पुरुषो वेद तस्य तावदेव चिरं यावन्न विनीत्येऽयं सम्पत्स्ये ।" इति ;  
अत्रायशब्दस्य आनन्तर्यमर्थो न वेति विचारेण निर्णय्य अस्याः स्मृतेस्तात्पर्यं भगवत्पादीय-भाष्योक्त-  
दिशा प्रतिपादयताम् । 15

7 ब्रह्मस्वरूपानन्दस्य विज्ञानं भवितुमर्हति न वेति तदुद्धारण्यकमाध्यानुसारं विचार्य  
समाधीयताम् । 15

• SECOND HALF

Examiner—Pt. KOMILESWAR BHATTACHARYYA SASTRI, M.A.

Marks—25

1. Translate into English :—

25

(a) जीवो हि नाम देवताया आभासमात्रम् । बुद्ध्यादिभूतमावासंसर्गजनितः आदर्शे  
इव प्रविष्टः पुरुषप्रतिबिम्बः, जलादिष्विव च सूर्यादीनाम् । ननु कथामावद्देह जीवः, स्वप्ने प्राप्ते ?  
नेष दीपः ; सदात्मना सत्यत्वाभ्युपगमात् । सर्व्वश्च नामरूपादि सदात्मनैव सत्यं विकारजातम् ।  
स्वतस्तु अमृतमेव । अतः सदात्मना सर्व्वव्यवहाराणां सर्व्वविकाराणाञ्च सत्यत्वं, सतीऽन्यत्वे च  
अमृतत्वमिति न कश्चिद् दीपः तार्किकैरिह अनुवक्तुं शक्यः ।

(b) मोक्षे विज्ञानान्तरं आनन्दान्तरञ्च अभिव्यज्यते इति, तैर्वक्तव्यः अभिव्यक्तिशब्दार्थः ।  
यदि तावत् उपलब्धिविषयव्याप्तिः अभिव्यक्तिशब्दार्थः, ततो वक्तव्यं—किं विद्यमानमभिव्यज्यते,  
अविद्यमानमिति वा ? विद्यमानमिति चेत्, यस्य मुक्तस्य तदभिव्यज्यते तस्य आत्मभूतमेव तत्  
इति, उपलब्धिव्यवधानानुपपत्तेः नित्याभिव्यक्तत्वात्, मुक्तस्य अभिव्यज्यते इति विशेषवचनमनर्थकम् ।  
अथ कदाचिदेव अभिव्यज्यते, उपलब्धिव्यवधानादनात्मभूतं तत् इति, अन्यतोऽभिव्यक्तिप्रसङ्गः, तथाच  
अभिव्यक्तिसाधनापेक्षता ।

(c) यथा नद्यः स्यन्दमानाः समुद्रे

असं गच्छन्ति नामरूपे विहाय ।

तथा विज्ञानं नामरूपादिमुक्ताः

परात्परं पुरुषमुपैति दिव्यम् ॥

(GROUP B)

## EIGHTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

Examiner—MM. PT. SITAKANTHA VACHASPATI

Full Marks—75.

अधःस्थेषु प्रश्नेषु पञ्च प्रश्नाः समाधेयाः ।

१। के तावदग्राधानकालाः ? ते च सूत्रोक्तपूर्वकं प्रदर्शयन्ताम्, अपि च “तथा तथिनस्त्वपर्वसमवाये” इति सूत्रं विचारबुद्ध्या व्याख्यायताम् । १५

२। ऋते भगया वाचाश्चिर्भूत्वा । १५

यज्ञादेव निवर्तते ।

यस्यो जघन्यं भुञ्जीतेवेति ।

—उपक्रमं प्रदर्शय सूत्रार्थं व्याख्याहि ।

३। परमेष्ठो, गृहमेधो, परिसमूहनम्, उपसोर्णाभिघारितम्, प्रत्यभिघारणम्—इत्येतेषां शब्दानां कौटुशी व्युत्पत्तिः, के वा अर्थाः—टीकाकारोक्तदिशा निर्णयिताम् । १५

४। “अथैने अन्निरनुमाष्टिं, विष्णोर्मनसा पूते ख्य इति ।” १५

“सम्पूयोऽपुनात्युदगयाभ्यां पवित्राभ्याम् ।”

सूत्रार्थं व्याख्यायताम् । सम्पूयनं कौटुशम् ? उत्पवनं वा कौटुशम् ? अपि क्षुतिपद्य-माराहति भवतः होमे उत्पवनरीतिः कौटुशीति ?

५। विश्राणिते फलीकरणानाम् आचामस्यापामिति । १५

वलिं हरेत् स रौद्री भवति स रौद्री भवति ।

टीकाकारोक्तदिशा व्याख्यायतां सूत्रम् ।

६। ब्राह्मणचक्रियवैश्रानां उपनयने कौटुशानि वसनानि, कौटुशानि उत्तरीयाणि, रश्मनाः कौटुशाः, दण्डाय कौटुशाः—सूत्रोक्तपूर्वकं निर्णयेयाः । १५

७। इदंशमङ्गानिष्ठाः संवत्सराः नव षट् दय इति विकल्पः । संवत्सरमव्येके, व्रतानुभूयः पूर्वोक्त्युता मङ्गानाकाः । १५

—सूत्रार्थं व्याख्यायताम् ।

८। स्वयमिव तु । मन्त्रवर्णो भवति । १५

—उपक्रमं प्रदर्शय सूत्रार्थं व्याख्याहि ।

## SECOND HALF

Examiner—MR. HARIHAR BANERJEE, M.A.

Translate into Sanskrit :-

25

(a) Two motives are indeed declared for the acquisition of wealth: one temporal enjoyment, the other the spiritual benefit of alms and so forth. Now since the acquirer is dead and cannot have temporal enjoyment, it is right that the wealth should be applied to his spiritual benefit. Accordingly Brhaspati says, of property which descends by inheritance, half should carefully be set apart for the benefit of the deceased owner to defray the charges of his monthly, six-monthly, and annual obsequies. So Apastamba ordains, 'Let the pupil or the daughter apply the goods to religious purposes for the benefit of the deceased'. By saying 'To defray the charges of his monthly, etc. obsequies' his participation, and by directing 'religious purposes' his spiritual benefit, are stated as reasons. It is reasonable, therefore, that, on failure of kindred which might present oblations in which he would participate, the succession should devolve on the maternal uncle and the rest, who present oblations which he was bound to offer.

(b) By the reasoning thus set forth, if the elder brother have two shares of his father's estate, how should the highly venerable father, being the natural parent of the brothers, and competent to sell, give or abandon the property and being the root of all connection with the grandfather's estate, be not entitled in like circumstances, to a double portion of his own father's wealth?

(GROUP C)

## FIFTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

Examiner—MR. VEDANTAKRISHNA N. S. ANANTAKRISHNA SASTRI

*Answer the FOURTH question and ANY FOUR of the rest.*

1. अधोलिखितानि वाक्यानि प्रकरणनिर्देशपूर्वकं व्याख्यायन्ताम्— 12

(१) शब्दकल्पनायां च सा च शब्दकल्पना च ।

(२) पृथिवीचयनप्रतिषेधार्थं च यद्वाक्यम् चयनप्रतिषेधार्थमेव तत् ।

(३) प्रसिद्धैरर्थवत्त्वात् प्रतिविशेषकरत्वाच्च ।

2. आत्मवादं इति काराभिमतं निष्कृष्टापूर्वाधिकरणे आत्मविभुत्वविचारस्य प्रसङ्गं निरूप्य च सौगतमतनिराकरणप्रकारः सुविशदं संगृह्यताम् । 12

3. मन्त्राधिकरणे केन केन स्वेष नियमविधेः परिसंख्याविधेश्च संगृह्य इति विविच्य नियम-परिसंख्याविधौ विषयविवेकपूर्वकं दृष्टार्थत्वेऽप्यध्यने कथं विधिः ? इति निष्कृष्यताम् 12

## 4. अधोलिखितानामधिकरणानां पञ्चादयथाः संगृह्यन्ताम्—

27

- (१) हेतुवन्निगदाधिकरणम् । (२) यववराहाधिकरणम् । (३) राजपेयाधिकरणम् ।  
 (४) भावार्थाधिकरणम् । (५) सर्पाशुयाजाधिकरणम् । (६) प्रकरणात्तराधिकरणम् ।  
 (७) असंज्ञाविरोधाधिकरणम् ।

5. प्रथमाध्याय-प्रथमपादस्य तर्कपदत्वव्यवहारे प्रथमाध्यायद्वितीयपादस्यार्थवादपादत्वव्यवहारे च निमित्तं संगृह्य श्रुतिपादे आचार-व्याकरण-जाहाधिकरणानां का सङ्गतिरिति निष्कथ्यताम् । 12

6. वनवादः स्फोटवादश्च मीमांसकमते कथं विरोधी ? मीमांसकाभिमतं शब्दस्वरूपं किम् ? धर्मशास्त्रसमालोचने मीमांसायाः कः उपयोगः ? कथं मीमांसाशास्त्रस्य दर्शनत्वम् ? सर्वमिदं विविच्यताम् । 12

## SECOND HALF

Examiner—MR. HARIHAR BANERJEE, M.A.

Translate into English :—

25

(a) संबन्धावगमवेलायां ततः प्राक्काले च यादृशमर्थरूपं तादृशमेव शब्दः आरयति न त्वात्मानमर्थेऽप्यस्यतीति । कथं तर्हि गौरयं युक्ती गच्छतीति इत्थोऽयमिति च सामानाधिकरण्यम्, जातिशब्दस्तावज्जातिं आरयित्वा तथा तादात्म्येन व्यक्तिं बोधयन्मुपस्थितव्यक्तिबोधकैनायमित्यनेन सामानाधिकरण्यं भजते, तथा गुणशब्दः क्रियाशब्दस्य, इत्यशब्दोऽपि यस्य पिण्डस्य वाचकत्वेन प्रागवगतत्वं आरयित्वा तत्तादात्म्येन पुरःस्थितं पिण्डं विकल्पयति न त्वात्माना, नहि इत्थोऽयमित्यस्यार्थः इत्यशब्दोऽयमिति, किं तर्हि इत्य इतिनामसीत्यर्थः, योऽसौ चैवे मासप्रख्याभिरुज्जयिन्वासुपलब्धो इत्यः सोऽयमिति, तेनात्रापि न शब्दस्वरूपमर्थस्य विशेषणं किन्तु पूर्वानुभूतार्थस्मरणोपयोग्येव, तत्रापि शब्देन पूर्वोऽवगतव्यक्ति-तादात्म्येन पुरःस्थिताव्यक्तिर्विशिष्यत इति विनैवाध्यासेन सामानाधिकरण्यं विशेषणविशेष्यभावयार्थमुखेनैव सम्भवतीति निष्प्रमाणकोऽप्यास इति ।

(b) यद्यपि शिष्यतेऽनेनेत्येव शास्त्रशब्दः प्रवृत्तः, तथापि तस्मात् प्रयोगाभावात् पङ्कजादिवद्योगकव्यभ्युपगमेन धर्माधर्मापदेशीनि चतुर्दशाष्टदश वा विद्यास्थानानि शास्त्रशब्दमिधानौयकं भजन्ते नान्यत् । शास्त्रसर्गादि शब्दसामान्यप्रयुक्त्यैव प्रामाण्यशक्तिः, नहि शब्दविशेषस्य शास्त्रस्य शक्तिविशेषोऽस्ति ।

## (Mimamsa and Smṛiti.)

## SIXTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

Examiner—MM. PT. JOGENDRANATH TARKAVEDANTATIRTHA

सर्वे ऽत्राः समानमानाः ।

( ये केचन चत्वारः प्रश्नाः समाधेयाः । )

1. “ऊहित्वा सङ्गतीस्त्रिसप्तत्याऽवान्तरसङ्गतिम् । 12½

ऊहिदाक्षेप-दृष्टान्त-प्रत्युदाहरणादिकम् ॥”

कारिकार्थं निरूप्य सङ्गतिस्वरूपमुल्लिख्य सङ्गतिनिरूपणफलं प्रदर्शय । किमप्येकमधिकरण-  
मुपादाय सङ्गतीं प्रदर्शय ।

2. धर्मस्य विध्येकमेयत्वं प्रसाध्य धर्मविचारशास्त्रस्य वेधत्वं गुरुमतनुसृत्य 12½  
प्रतिपादय ।

3. स्कीटवादिमतं निरस्य शब्दस्वरूपं निर्णीय शब्दनित्यताधिकरणमारचय । 12½

4. वेदापौरुषेयत्वमुपपादय । 12½

“वेदस्यापि पौरुषेयत्वे तत्कर्त्तृपलभ्यते, न चीपलभ्यते, अतो वाक्यत्वहेतुः प्रतिकूलतर्क-  
पराहतः ।” को वास्य विस्तरसन्दर्भस्यार्थः ?

कर्त्तृरनुपलभ्यमानतो यदि अपौरुषेयत्वं तर्हि अरख्यस्य जीर्णकूपारामादीनामपि  
अपौरुषेयत्वं स्यात् तेषामपि कर्त्तृरनुपलभ्यते । समाधीयतामयमाक्षेपः ।

5. अर्थवादस्य धर्मोपपत्तिरिति न वेति विवक्ष्य सिद्धान्तं प्रदर्शय । 12½

6. व्युत्पत्तिवाक्यानां धर्मोपपत्तिरिति निरूप्य— 12½

“येन यत्नेन मन्वाद्यैरात्मवाक्यं प्रपाठितम् ।

कक्षात्तेनैव तन्मूलं चोदना न समर्पिता ॥”

इत्याक्षेपस्य समाधानं लेख्यम् ।

7. “सदाचारोऽप्रमा मावेत्यादिना प्रदर्शितं सदाचारप्रामाण्यं निरूपय । 12½

केषुचिद्वचिणदेशेषु आत्मकर्णाटकादिषु मातुलस्य दुहितरं पेटेष्वेवैषिञ्च शिष्टाः परिणयन्ति,  
सोऽयमाचारः प्रमाणं शिष्टाचारत्वान् हीलाकाद्याचारवत् इति पूर्वपक्षे प्राप्ते न्यायमालाविस्तीर-  
नसिद्धान्तं प्रदर्शय ।

8. धात्वर्थव्यतिरेकेण भावना नेति चेन्न तत् ।

12½

सर्वधात्वर्थसम्बन्धः करोत्यर्थो हि भावना ॥

धात्वर्थः कारणं तस्यां समानपदवर्णितः ।

द्रव्याद्युपपत्तिर्ह्येता धात्वर्थोन्मादनात्मिका ॥

विकारीकदिशा कारिकादयं व्याख्येयम् ।

## SECOND HALF

Examiner—MM. PT. PRAMATHANATH TARKABHUSHAN

Full Marks—50.

( मीमांसान्यायप्रकाशे प्रश्ना, पूर्वसंख्या पृष्ठविंशतिः ) ।

1. “सोमेन यजेत” “दध्ना जुहोति” इत्यनयोर्विधवाक्ययोर्मिथो वैलक्षण्यं अपेक्षितविधिलक्षणस्वरूपनिर्देशपूर्वकं मीमांसान्यायप्रकाशोक्तदिशा विस्पष्टतया प्रतिपाद्यताम् । 15

2. विनियोगविधौ प्रमाणभूतयोर्वाक्यप्रकरणयोर्लक्षणीकृतखपुरस्कारं प्रबलदुर्बलभावः सोदाहरणोपन्यासं मीमांसान्यायप्रकाशानुसारेण विचार्य व्यवस्थाप्यताम् । 15

3. शब्दार्थभावनयोः सामान्यलक्षणोपन्यासपूर्वकं मिथो वैलक्षण्यं सोदाहरणोपन्यासं सयुक्तिकमुपपाद्यताम् । 10

4. वैयाकरणमतानुसारेण आख्यातानां कर्त्तरि शक्तिरङ्गीकरणीया न वेति मीमांसकमतानुसारेण विचार्य समाधेयताम् । 10

उल्लिखितेषु चतुर्षु प्रश्नेषु द्वयोः समाधानमपेक्षितम् ।

निम्नलिखितयोः प्रश्नयोरिकस्यैव उत्तरं लेख्यम् ।

1. आङ्गलभाषया अनुवादी विधीयताम्—

25

“यावज्जीविके प्रयोगे चिन्तयते । किं सर्व्वोद्गीपसंहारसमर्थः पुरुषोऽधिक्रियते, उत्तेकदेशीय-संहारसमर्थोऽपीति । एकादशे तु कथंभावः सर्व्वैरङ्गेनिराकाञ्चीक्रियत उत्त एकैकेनापीति, सर्व्वैरितिसिद्धान्तः । एकादशे स्थित इदमारभ्यते । ‘अग्निहोत्रं जुहोति’ इत्येवमुत्पन्नस्य विपरिवर्त्तमानस्य निमित्तेफलं च विधानात् तावत्कर्त्तव्यमस्मिदम् । नापि प्रयोगभेदः । अन्तर्गतत्वात् काव्ये नित्यप्रयोगस्य । स्तुतिगतस्त्वसि भेदः । तमेव भेदमाश्रित्य भाष्यकारस्त्वाह—द्वितीये श्रवण इति । सर्व्वशक्त्यधिकरणसिद्धान्तजनिताशङ्कया उत्तरमधिकरणमारभ्यते ‘काव्येषु चैवमर्थत्वात्’ इति । काव्ये च सर्व्वोद्गीपसंहारसमर्थस्याधिकारः, तादृशस्य विद्यमानत्वत् । न तु नित्ये तादृशोक्तिः, सर्व्वदा यः सर्व्वोद्गीपसंहारः शक्नोति । तच्चादिकदेशोपसंहारसमर्थोऽप्य-



क्रियते । सर्वैरङ्गैः क्रतुर्निराकाञ्चीक्रियते । तादृश एव कर्तृधर्मत्वेन चोद्यते । तदुक्तं  
“तथाभूतीपदेशात् ।”

2. अधस्तनप्रबन्धसंग्रहलभाषया अनुवादः क्रियताम्—

25

“सङ्ख्यसंवत्सरं तदायुषामसम्भवान्मनुष्येषु । शतान्यायुरसेति विग्रहीष्याम इत्युक्ते नैवं  
संख्याशब्दानां समास इष्यत इति । यौ द्विवचनबहुवचनान्तौ संख्याशब्दौ ताभ्यां न समास इष्यत  
इति । कथोपपत्त्या, द्विवचनबहुवचनयोः प्रमाणाभावात् । राजपुरुष इत्युक्ते न राजशब्दात्परं  
द्विवचनं बहुवचनं वा श्रूयते । नन्वेकत्वेऽपि प्रमाणं नास्ति तेन वा कथं विग्रहः ? उच्यते ।  
एकत्वं जात्यपेक्षं, लिङ्गमर्थप्रामाण्यपेक्षम् । तस्मादेकवचनान्तेनान्यतमलिङ्गयुक्तेन विग्रही भवति ।  
चित्रगुरिति चित्रा गावो यसेति विग्रहे प्रयोगश्रुतिः प्रमाणम् । भूमादिष्वर्थेषु मतुवादश्च इति ।”

(GROUP C)

### SEVENTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

Examiner—MM. P.T. HARIDAS SIDHANTABAGIS

1. “न शूद्राश्चैकपाण्यावर्जितेन ।”

13

उपक्रमप्रदर्शनपूर्वकं व्याख्यायतामिदं सूत्रम् ।

दक्षिणपाण्यावर्जितेन उदकेन आचमनं भवति न वा ?

टीकाकृती मतानुसारेण समाधानं विधेयम् ।

अथवा

“गुणवन्तम् ।”

अस्य सूत्रस्याशयो वर्ण्यताम् । एकवचनप्रयोगफलञ्च दर्शयताम् ।

2. “गर्भे चाविज्ञाते ।”

13

इति सूत्रेण अविज्ञातगर्भवधमात्रे यदि ब्रह्महत्या प्रायश्चित्तं विधेयं स्यात्, तदा अन्त्याजागर्भ-  
वधेऽपि तद्विवृतुर्हति । अत्र किं समाधानम् ?

अथवा

आपसम्प्रीत-आचमनप्रकारः संक्षेपेण लिप्यताम् ।

3. “अभावे उदकम्” अनेन सूत्रेण कस्याभावे कुत्र उदकम् विधीयते ? 13.

अथवा

“नाश्व आर्यः शुद्धायाम्” “वध्यः शुद्ध आर्यायाम्” ।

सूत्रद्वयमिदं टीकाकारोक्तरीत्या व्याख्यायताम् । आर्यशब्दस्यात्र कोऽर्थो विवक्षितः ?

4. “असपिण्डा च या मातुरसगोत्रा च या पितुः । 18.

सा प्रशस्ता द्विजातीनां दारकर्षणे मैथुने ॥”

कुल्लूकभट्टरीत्या व्याख्यायतामिदं वचनम् । अपि च ब्रह्मप्रमातामहदौहित्रीपौत्री विवाद्या न वा ?

अथवा

“अनर्दशाष्टि स्याताच्चेत् पुनर्मरणजन्मनी ।

तावत् स्यादयत्तिर्विभो यावत् तत् स्यादनिर्दृश्यम् ॥”

वचनमिदं व्याख्याय किञ्चिदुदाहरणं प्रदर्शयताम् ।

5. “गुरुं वा बालवृद्धौ वा ब्राह्मणं वा बहुश्रुतम् । 18.

आततायिनमायानं हन्यादेवाविचारयन् ॥”

इति मनुस्मृतौ आततायिवधो विहितः,

“पापमेवाग्रयेदह्मन् हत्वैतानाततायिनः ।”

इति गौतायान्तु आततायिवधे पापं दर्शितम् । तदत्र विरोधे कः सिद्धान्तः ?

अथवा

मनुना कतिविधाः पुत्रा अभिहिताः ? कानि तेषां नामानि ? तेषां मध्ये च के दायधिकारिणः ?

SECOND HALF

Examiner—MM. PT. SITIKANTHA VACHASPATI

Full Marks—25.

पञ्च प्रश्नाः समाधेयाः ।

- १। उदगग्रने पूर्व्ये पक्षे पुण्येऽहनि प्रागावर्तनादङ्गः कालं विद्यात् । ५

(क) कालमित्यनेन केषां कर्मणां कालो विधीयते ? किं गृह्योक्तकर्मसामान्यस्य कर्मविशेषस्य वा ? आद्ये पक्षे षट्कादौ पूर्व्याङ्गप्रसक्तिः स्यात्, द्वितीये स्वानुक्तत्वात् कथं

विशेषस्य परिचयः ? अपि च दक्षिणायनादौ गर्भाधानादि-सम्भवात् तत्र कथं सूचीकालादयः  
सम्भवति सर्व्वं विचार्य्य लिख्यताम्. अपि च पूर्व्वोक्त इत्यनुक्ताः प्रागावर्त्तनादङ्ग इति गौरवं कथम् ?

२। सर्व्वोक्तेष्वान्वाहार्य्यवन्ति ।

५

क' किं नाम अन्वाहार्य्यम् ? सर्व्वेषां अन्वाहार्य्यवत्त्वे षट्कादावपि तत्प्रसक्तो किं  
समाधानम् ?

३। यज्ञोपवीति-प्राचीनावीतिनीः किं स्वरूपम् ? तत्र च किं किं सूत्रं कस्मिन् कस्मिन्  
कर्त्तव्यं वा तथोक्तं इत्यम् ?

५

४। सन्ध्यां पौर्णमासीमुपवसेत् ।

५

उत्तरामित्येके ।

(क) सूत्रद्वयं व्याख्यायताम् । का नाम सन्ध्या ? उपवासपदस्य भोजनाभावपरत्वं न  
वा ? कस्मिन् प्रकरणे एतत् सूत्रमुक्तम्, विचारबुद्ध्या सर्व्वं समाधीयताम् ।

५। विवाहकन्यालक्षणविचारः कया रीत्या कर्त्तव्यः ? आचार्य्योक्तरीतिमुद्धृत्य  
निर्णय्यताम् ।

५

६। षट्का कतिविधा ? किं नामिका च ? के वा तामां कालाः ? सूत्रनिर्द्देशपूर्व्वक-  
मुल्लिख्यताम् ।

५

७। वयः पौर्णमासी काला भवन्ति ; सन्ध्या वास्तमितोदिता वीक्ष्यैर्वा । व्याख्यायतां सूत्रम् ।

५

८। अथ प्रत्युपस्पर्शनामि ।

५

सूत्रेऽस्मिन् प्रत्युपस्पर्शनशब्दस्य कोऽर्थः ? तानि च कानि भवन्ति, तत्र च किं सूत्रम् ?

### (GROUP C)

### EIGHTH PAPER

*The questions are of equal value.*

#### FIRST HALF

Examiner—DR. AMARESWAR THAKUR, M.A., PH.D.

Full Marks—75.

Answer FIVE questions only.

1. What idea have you formed about the constitution of ancient Indian Court? What were the duties and responsibilities of its *sabhyas*?

2. Write a clear note on *uttara*. Comment on—

साक्षिभूतयतः सन्तु साक्षिणः पूर्व्ववादिनः ।

3. Explain fully :—

- (a) आत्युत्कर्षो युगे ज्ञेयः सप्तमे पञ्चमेऽपि वा ।  
अत्यथै कर्त्तव्यं साध्यं पूर्ववशाच्चरीतरम् ॥
- (b) उपपातकशक्तिः स्वादेवं चान्द्रायणेन वा ।  
पथसा वापि मासिन परकीषाथवा पुनः ॥
- (c) भूयां पितामहीपाता निबन्धो द्रव्यमेव वा ।  
तव स्वात् सदृशं साध्यं पितुः पुत्रस्यैव हि ॥

4. Annotate :—

- (a) अर्थशास्त्रात् बलवद्दर्शशास्त्रमिति स्थितिः ।
- (b) अनेकपितृकाणान्तु पितृती भागकल्पना ।
- (c) पुत्रपौत्रैश्चैव दिव्यं निरूपे सन्निभाषितम् ।

5. Draw a list of successive heirs in the absence of sons. Discuss in this connection the view of the Mitākṣarā regarding the propriety or otherwise of *niyoga*.

6. What is Parāśara's definition of *atithi*? How should he be entertained? Explain the terms *parivitti* and *parivettā*. When is *parivedana* to be allowed?

7. How has the Mitākṣarā developed the law of prescription? Discuss the full implication of *tripuruṣabhoga*.

## SECOND HALF

Examiner — DR. R. G. BASAK, M.A., PH.D.

Full Marks—25.

1. Translate the following faithfully into Sanskrit :—

25

The economist arrived at the conclusion that industry would thus be brought to a standstill, seeing that the magnitude of industry is dependent upon the amount of available capital. Population must then become stationary, and all economic movement must cease. Though alarmed at the economic significance of this prospect, the economist acquiesced in its ethical import. On the whole he thinks that such a state would be a very considerable improvement on our present condition. With economic activity brought to a standstill the current of human life would simply change its course and turn to other fields. The decay of Mammon-worship and the thirst for wealth would simply mean an opportunity for pursuing worthier objects. He hoped that the arrest of economic progress would result in a real moral advance, and in the appeasement of human desires he looked for a solution and for the final disappearance of the social problem. And as far as we can see the reformers of to-day have nothing better to offer us.

(GROUP D)

## FIFTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

*Examiner—MM. PT. JOGENDRANATH TARKAVEDANTATIRTHA*

सर्व्वे प्रश्नाः समानमानाः ।

( ये केचन चत्वारः प्रश्नाः समाधेयाः ) ।

1. ज्ञेयगतं ज्ञप्तिगतञ्च प्रत्यक्षत्वव्यवहारप्रयोजकं निरूपय । प्रत्यक्षज्ञानविषयत्वमात्रे चैव ज्ञेयगतप्रत्यक्षत्वनिरूपणसम्भवे गत्यक्रतां पृथक् निरूपणे कोऽभिप्रायः ? 12½
2. भ्रमज्ञानस्य प्रातिभासिक-तत्कालीत्पन्नरजतादिविषयकत्वे किं मानम् ? परोक्षभ्रमस्य प्रातिभासिक-तत्कालीत्पन्नरजतादिविषयकत्वं वेदान्तिभिरङ्गीक्रियते न वेति सयुक्तिकं निश्च । 12½
3. मनस इन्द्रियत्वखण्डने वेदान्तिनां कोऽभिप्रायः को वा मनस इन्द्रियत्वखण्डनप्रकारः ? 12½
4. मिथ्यात्वलक्षणमुल्लिख्य तल्लक्षणघटकपदानां व्यावृत्तिं प्रदर्शय प्रपञ्चमिथ्यात्वानुमानरीतिः प्रदर्शनीया । 12½
5. 'अर्थापत्तिप्रमाणं' निरूप्य तस्यानुमानेऽन्तर्भावो यथा न भवति तथा प्रतिपादय । 12½
6. तच्च 'अपरोक्षं' ज्ञानं तत्त्वमस्यादिवाक्यादिति केचित् । मनननिदिध्यासनसंस्कृतान्तःकरण-देवेत्यपरे । एतन्मतद्वयनिष्कर्षं प्रदर्शय । प्रत्यक्षमित्यनुक्ता कथमपरोक्षमित्युक्ता गत्यक्रता ? प्रत्यक्षापरोक्षशब्दयोरर्थभेदोऽस्ति न वेति निरूपय । 12½
7. "फलव्याप्यत्वमेवास्य शास्त्रकृद्भिर्निवारितम् ।  
ब्रह्मण्यज्ञाननाशाय इतिव्याप्तिरपेक्षिता ॥"  
सोऽनृत्तं कारिकेयं व्याख्यायताम् । 12½
8. मुखाभासको दर्पणे दृश्यमानो, 12½  
मुखत्वात् पृथक् न नेवारितं वस्तु ।  
चिदाभासको धीषु जीवोऽपि तद्वत्,  
स नित्योपलब्धस्वरूपोऽहमात्मा ॥  
व्याख्यायतामर्थं श्लोकः टीकाकृतदुक्तदि ४।

## SECOND HALF

Examiner—Pt. NALINIMOHAN SASTRI, M.A.

THREE questions are to be attempted, of which the FIRST must be one.

1. Translate into English either (a) or (b):—

25

(a) प्रमादं वै सत्यमहं ब्रवीमि । प्रमादः प्रभृतिः स्वाभाविकब्रह्मभावात् । तं प्रमादं निष्ठाज्ञानस्यापि कारणमात्मानवधारणमात्माज्ञानं सत्यं जननमरणादिसर्वानर्थबोधजनकं ब्रवीमि । तथा सदाऽप्रमादं स्वाभाविकस्वरूपेणावस्थानमस्यतत्त्वं ब्रवीमि । तथा च श्रुतिः स्वरूपेणावस्थानमेव मोक्षपदं दर्शयति—परं ज्योतिरुपसंपद्य स्वेन रूपेणाभिनिपद्यते इति । तथानुगीतासु स्पष्टमाह—एकी यज्ञी नास्ति ततो द्वितीयो यो हृदयस्तमहमनुब्रवीमि । यस्मिन्निहा सर्वमिदं यस्मिन् स्वरूपसंस्थाश्च भवन्ति सत्या इति । यत एव स्वरूपावस्थानलक्षणो मोक्षोऽत एव चतुर्विधक्रिया-फलविलक्षणत्वादेव न कर्मसाध्यमस्यतत्त्वं नापि समुच्चिताभ्यां ज्ञानकर्मभ्यामिति 'अस्य कर्मणा केचिद्' इत्येतदनुपपन्नमेवेत्युक्तं भवति । वक्ष्यति चास्य पक्षस्य स्वयमेव निराकरणम्—कर्मादये कर्मफलानुरागाच्चतानुयानि न तरन्ति सत्यम् । ज्ञानेन विहांसोऽभ्येति नित्यं न विद्यते ह्यन्वया तस्य पन्थाः इति ।

(b) ननु कर्मणामपि मोक्षहेतुत्वं श्रूयते—विद्यां चाविद्यां च यस्तद्देहीभयं सङ्केति, कुर्वन्नेवेह कर्माणि जिजीविषेष्कृतं समा इति च । नेतत्, पूर्वापरानुसन्धाननिबन्धनोऽयं धर्मः । तथा हि—अविद्याया सत्यं तोर्वा विद्ययास्तमन्नुते इति विद्याविद्ययोर्भिन्नविषयत्वेन समुच्चयाभावः श्रुत्यैव प्रदर्शितः । इममेवार्थं स्पष्टयन् भगवान्मनुः—तपो विद्या च विप्रस्य निःश्रेयसकरे लभे इत्युक्ते समुच्चयाशङ्का मा भूदिति तपसा कञ्चन हन्ति विद्ययास्तमन्नुते इति तपसो नित्यनैमित्तिक-लक्षणस्य कर्मणोऽन्तःकरणशुद्धौ हि विनियोगं दर्शितवान् । तथा ईशावास्यमिदं सर्वमिति सर्वस्य तावन्मात्रत्वमुक्त्वा तदात्मभूतस्य सर्वस्य तावन्मात्रत्वं पश्यतस्तद्दर्शनेनैव कृतार्थस्य साध्यान्तरमपश्य-तस्तेन त्यक्तेन भुञ्जीथा इति त्यागेनैवात्मपरिपालनमुक्त्वाऽतदात्मवेदिनस्तर्हि किनात्मपरिपालनमित्या-शङ्काह—कुर्वन्नेवेह कर्माणि जिजीविषेष्कृतं समाः । एवं त्वयि नावश्यतोऽस्ति न कर्म लिप्यते नरे इति ।

2. *Vidyāranya Munīśvara* propounds a view which is a compromise between absolute Monism and Dualism of the *Sāṃkhya-Yoga*. Justify this criticism, with special reference to the features of the view held in *Faṭichadaśī*.

12½

3. What is साक्षी, and why is it admitted by the *Vedāntins*? Give the views of the different schools of *Vedāntins* on the nature of साक्षी.

12½

Or,

Can objective knowledge such as that of a **चट** destroy the ignorance which covers the true nature of *Brahman*? Give reasons for your answer. Discuss the different views on how this universal ignorance is lifted.

4. (a) What is *Dr̥ṣṭi-sr̥ṣṭivāda*? How does it differ from *Sr̥ṣṭi-dr̥ṣṭivāda*? How do both maintain the general Vedānta doctrine? Wherein do they differ from other schools of Vedānta? 6½

(b) Explain the four *Mahāvākya*s. 6

5. (a) Define **ब्रह्मानन्द**, and show how it is the root of all real happiness. 8½

(b) Define and illustrate **परिसंख्याविधिः** । 4

(GROUP D)

### SIXTH PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

Examiner—MM. VEDANTAHISARAD N. S. ANANTAKRISHNA SASTRI

यथाभिमतं पञ्चैव प्रश्नाः समाधेयाः—

1. परस्परव्यासकारणानि संगृह्णान्तःकरणे चेतन्याध्यासे कथं चेतन्यस्यापि न मिथ्यात्वमिति शङ्का परिक्रियताम् । 15

2. तत्पुनर्ब्रह्म प्रसिद्धं वा स्यात्? अप्रसिद्धं वा? इति भाष्यं कथं सूत्रादम्? जिज्ञास्यं ब्रह्म सगुणं वा निर्गुणं वा? आद्ये कथमवैतवादः? द्वितीये कथं जन्मादिलक्षणाचल्यम्? सर्वं विविच्यताम् । 15

3. अधोलिखितानि वाक्यानि पूर्वपक्षरीत्या सिद्धान्तरौत्या च व्याख्यायन्ताम्— 15

(१) यस्य ब्रह्म च चक्षुः चांभे भवत ओदनः ।

मृत्युर्यस्योपसिचनं क इत्या वेद यत्र सः ॥

(२) अयं यदिदं ब्रह्मपुरीं दह्यते पुच्छरोकां वेश्य दहरोऽधिभ्रमराकाशस्तस्मिन् यदन्तस्तदन्वे-  
ष्टव्यम्, तत्रैव विजिज्ञासितव्यम् ।

(३) यत्र दद्रे श्वमयाक्षमचक्षुःश्रीव यदभूतयोनि परिपश्यन्ति धीराः ।

4. अधोलिखितान्यधिकारणानि सति मतभेदे तत्समालोचनपूर्वकमावधारयन्ताम्— 15

(१) आनन्दमयाधिकारणम् । (२) वैश्वानराधिकारणम् । (३) महद्दीर्घवशाधिकारणम् ।

(४) तदनन्वत्वाधिकारणम् । (५) न स्थानतोऽप्यधिकारणम् ।

5. अधोलिखितेष्वधिकारवाचिकेषु प्रत्येकमेकमापरस्य कथं न पीनरूपमिति विविच्यताम्— 15

(१) चक्षुःसाधिकारणान्तराधिकार्ये । (२) अतएव प्राणाधिकार्य-प्राणसंसाधिकार्ये ।

(३) ज्योतिश्चराधिकार्यज्योतिर्दर्शनाधिकार्ये ।

6. द्वितीयाव्यायस्य किं नाम ? पादशतद्वयस्यापि विषयविवेकः कः ? द्वितीयपादे निरस्तानि दर्शनानि कानि ? 15

7. सूक्ष्माभ्यामिमतमुक्तात्मस्वरूपं तत्तत्सूक्ष्माभ्यावाक्यनिर्देशपूर्वकं विविच्यताम् । 15

## SECOND HALF

Examiner—MR. DEBENDRANATH RAY, M.A.

1. Translate into Sanskrit one of the following passages :— 25

(a) Science traces everything back to primeval atoms and germs, and there it leaves us. How came these atoms and energies there, from which this wonderful universe of worlds has been evolved by inevitable laws? What are they in their essence, and what do they mean? The only answer is, it is unknowable. It is behind the veil, and may be anything. Spirit may be matter, matter may be spirit. We have no faculties by which we can even form a conception, from any discoveries of the telescope or microscope, from any experiments in the laboratory, or from any facts susceptible of real human knowledge, of what may be the first cause underlying all these phenomena.

(b) If we turn for an answer to these questions from science to metaphysics we find ourselves in cloud-land. Mists of fine phrases and plausible conjectures form into philosophies, and dissolve away again without leaving a vestige of positive knowledge. The so-called intuitions of metaphysics seem really to amount to translations into language of our earnest wishes and aspirations. We shudder at the notion of annihilation; we revolt at the idea that all the high faculties of the mature and cultivated mind are to be extinguished by death; we long for a future life in which we may again see beloved faces. Some minds of a philosophical turn of mind proceed to build up on these slippery things a demonstration of God and immortality.

## (GROUP D)

### SEVENTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

Examiner—MR. PT. DURGACHARAN SANKHYA-VEDANTATIRTHA

अथस्तनेषु प्रश्नेषु त्रयः समाधेयाः ।

१ । विभेदजनकं ज्ञानं नाशमात्मनिकं गते ।

आत्मनो ब्रह्मणो भेदमसत्त्वं कः करिष्यति ॥



श्रीकौण्डिन्याय शाङ्करमतेन व्याख्याय रामानुजोक्तदिशा तथा व्याख्यायताम्, वीण शाङ्करमतं स्थापितं भवेत् । तयोश्च पक्षयोः कतरः श्रेयान् ? तदपि युक्तिः प्रमाणतश्च निरूप्यताम् । उभयोरेव पक्षयोः 'विभेदजनकं ज्ञानं' कौटुकं, तन्निरूप्यताम् । शाङ्करमते ज्ञानस्य नित्यतया कथं वा तस्य 'आत्यन्तिकनाशः सम्भवतीत्यपि सत्यमुपपाद्यताम् । २५

२ । "सत्यं ज्ञानमनन्तं ब्रह्म" इत्यत्र सत्यादिपदानां सामानाधिकरन्थ्यमङ्गीकृत्य कौटुकोऽर्थभेदः प्रपञ्चितः ? रामानुजेन वा तदर्थे कौटुकीमनुपपत्तिमुपन्यस्य कौटुकिमर्थान्तरं व्यवस्थापितम्, श्रीभाष्योक्तदिशैव सर्वमेतत् निरूप्यताम् । २५

३ । शङ्करेण अज्ञानस्यासत्त्वमनभिधाय किमिति नवीनोऽयमनिर्व्वचनीयतावाद आविष्कृतः ? कथं वा रामानुजेन मङ्गता प्रयत्नेन स वादो निराकृतः ? का नाम अनिर्व्वचनीयता ? तन्निराकरणप्रकारश्च कौटुकः ? सर्वमेतत् श्रीभाष्यमनुसृत्य निरूप्यताम् । रामानुजाभिमतः 'सदसत्' पदयोरर्थभेदश्च विव्रियताम् । २५

४ । जीव-परमात्मनोर्भेदवादिना रामानुजेन—"तत्त्वमसि" "अहं ब्रह्मास्मि" इति वाक्ययोः सामानाधिकरण्येनान्वयः स्वीक्रियते न वा ? स्वीक्रियते चेत्, कथं न भेदवादहानिः ? न स्वीक्रियते चेत्, कथं वा वाक्यार्थोपपत्तिः ? इत्येतत् तदीयामेव वाच्युक्तिमनुसृत्य सविचारमुपपाद्यताम् । २५

### अथवा

नियोगवाक्यार्थवादिसमतं संचेषिणोपन्यस्य रामानुजेनोक्तस्तद्वृथप्रकारः तत्फलञ्च तदुक्तरीत्येव विशदीकृत्य विव्रियताम् ।

### SECOND HALF

Examiner--PT. PANCHANAN TARKABAGIS

अधस्तनप्रश्नेषु द्वयं समाधेयम् ।

1. परमाणुकारणतावादं वितर्क्य अद्वैतब्रह्मसिद्धिप्रदर्शितरीत्या तत्खण्डनं विधेयम् । 12½
2. चित्तिकर्तृतया ईश्वरानुमानप्रक्रियां प्रतिषिध्य अन्यकारप्रदर्शितरीत्या तत्प्रयोजनं विव्रियताम् । 12½
3. समवायसम्बन्धपक्षे वैशेषिकसिद्धान्तं वितर्क्य अन्यकारप्रदर्शितनयेन तत्खण्डनप्रकारः प्रदर्श्यताम् । 12½
4. शून्यवादिनो मतं प्रदर्श्य निराक्रियताम् । 12½

(GROUP D)

## EIGHTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner—Mm. Pt. PRAMATHANATH TAREABHUSAN**Full Marks—50.*

( पञ्चैव प्रश्नाः समाधेयाः ) ।

1. “नासती विद्यते भावो नाभावो विद्यते सतः । 10

उभयोरपि दृष्टोऽन्तस्त्वनयोस्तत्त्वदर्शभाभिः ॥”

शाङ्करभाष्यमनुसृत्य अस्य श्लोकस्य तात्पर्यार्थो विस्मृततया प्रतिपाद्यताम् ।

2. लोचसाधनत्वेन ज्ञानकर्तृत्वाः समुच्चयः श्रीमद्भगवद्गीतासु अभिहितो न वेति शाङ्करभाष्य-  
दर्शितदिशा लोपपत्तिकं विचार्य समाधीयताम् । 103. “पुरुषं सोम्येत हृत्पट्टहोतमानयन्पद्मार्णवोत् स्वेयमकार्षीत् परश्वमसौ तपतेति ; स यदि  
तस्य कर्ता भवति, तत एवानृतमात्मानं कुरुते सोऽदृताभिसन्धोऽदृतेनात्मानं अन्तर्धाय परश्वं तप्तं  
प्रतिगृह्णाति स दह्यतेऽथ हन्यते । अथ यदि तस्याकर्ता भवति तत एव सत्यमात्मानं कुरुते स  
सत्याभिसन्धः सत्येनात्मानमन्तर्धाय परश्वं तप्तं प्रतिगृह्णाति स न दह्यतेऽथ मुच्यते । स यथा तत्र  
नादास्तेतदात्म्यमिदं सर्वं तत् सत्यं स आत्मा तत् त्वमसि ज्ञेयकेतो इति तदास्य विजज्ञाविति ।”  
शाङ्करभाष्यानुसारेण दृष्टान्तदार्ष्टान्तिकयोः साधर्म्यप्रतिपादनपुरस्सरं अस्याः स्मृतेस्तत्पर्यार्थो विस्मृततया  
प्रतिपाद्यताम् । 104. “अमात्रशतुर्थोऽस्य हाव्यः प्रपञ्चोपशमः शिवोऽद्वैत एवमोङ्कार आत्मा एव संविज्ञात्मात्मनात्मानं  
य एव वेद य एव वेद ।” अस्या भाष्यसु स्मृतैरुपक्रमप्रदर्शनपूर्वकं शाङ्करभाष्यानुसारेण व्याख्या  
क्रियताम् । 105. अविद्या किंस्वरूपा कस्य तस्या आश्रय इति गीताभाष्योक्तदिशा विचार्य  
समाधीयताम् । 10

6. गीतोक्त-त्यागसम्राजस्योः स्वरूपनिर्वचनं शाङ्करभाष्यमनुसृत्य विधीयताम् । 10

7. “ममेवाग्रो जीवलोके जीवभूतः सनातनः । 10

मनःषष्ठानौन्द्रियाणि प्रकृतिस्थानि कर्षति ॥” 10

शाङ्करभाष्यानुसारेण अस्य श्लोकस्य तात्पर्यार्थो वैशद्येन प्रतिपाद्यताम् ।

## SECOND HALF

Examiner—PT. KOKILESWAR BHATTACHARYA SASTRI, M.A.

Marks—25+25.

(a) न प्राणिन नापानेन मर्त्यो जीवति कश्चन ।

इतरेण तु जीवन्ति यस्मिन्नेतावुपस्थितौ ॥

Or,

(b) अस्तीत्येवोपलब्धस्य तत्त्वभावेन चीमयीः ।

अस्तीत्येवोपलब्धस्य तत्त्वभावः प्रसीदति ॥

1. In Question (a), what is referred to by the term 'इतरेण' ? What are the arguments by which Sāhikara seeks to prove the existence of what is implied by this term ? 10

Or,

In Question (b), how does the भाषाकार seek to prove or reach the positive source of the world ? If this source be denied, what would be the consequence according to Bhāṣyakāra ? 10

What is 'तत्त्वभाव' ? What relation is meant to be set up between the two in the stanza ? Clearly explain.

2. How is योग described in the *Kathā* ? 5

3. In your text of the Brihadāranyaka, the following भाष्य occurs— 10

“कः पुनरसौ सृज्युः, यस्मात् अतिमुक्तिर्याख्याता ?”

Here, explain the term मुक्ति, and show how अतिमुक्ति is to be obtained.

Or,

Explain the following position as given in the Bhasya :— 10  
'God though lifted high above the flux of time and space and in this sense has *negative* relation to the world, yet He stands in *positive* relation to it.'

What serious consequence would arise if we suppose there is no immanent working of God in the world ?

4. Translate into English : -

25

(a) न च निरवयवेषु अनेकार्थमता शक्यते कल्पयितुम्, दृष्टान्ताभावात् । यदपि आकाशस्य सर्वगतत्वादिधर्मभेदः परिकल्प्यते. परमाण्वादीनाञ्च गन्ध-रसाद्यनेकगुणत्वम्, तदपि निरूप्यमाणं परोपाधिनिमित्तमेव भवति । एतेन दृग्गादिशक्तिभेदानां परिणामभेदकल्पना परमात्मनि प्रत्युक्ता ।

(b) श्रेयपरिच्छेदरूपत्वात् ज्ञानस्य तदपरिच्छिन्नब्रह्मविषयं न सम्भवतीति तदज्ञानविलसितम् । दृग्दिग्दिमिति ब्रह्मणः परिच्छेदासम्भवेऽपि लक्षणेमुखेन इतरव्यावृत्ततामात्रेण परिच्छेदासम्भवात् । लक्षणेन परिच्छेदो हि सर्वत्र लक्ष्यविषयमितरव्यावृत्ततया ज्ञानम् । उद्दिष्टस्य ब्रह्मणो लक्षणे ब्रह्मान्तावर्तिरूपिते परोक्षिते च तल्लक्षणग्रन्थेभ्यः सजातीय-विजातीयैश्च दितरसकक्षपदार्थेभ्यो व्यावृत्तरूपं यत् तन्नम्रेति विज्ञायते ।

(GROUP E)

## FIFTH PAPER

*The figures in the margin indicate full marks.*

FIRST HALF

Examiner—PT. HARANCHANDRA SASTRI

1. “यस्यन्वसिद्धं तदाकारोऽस्ति विज्ञानं तत्प्रत्यक्षम्” इति प्रत्यक्षसूत्रं व्याख्याय योगिप्रयत्नेश्वरप्रत्यक्षश्रीनन्दस्य व्याप्तिः शाब्दज्ञानानुमानज्ञानयोरितिव्याप्तिर्य निरसनीये । 16

अथवा

“कल्पनाऽपोढमभानं प्रत्यक्षमिति केषांचित् प्रत्यक्षज्ञचक्षुः वादिनामनिर्देशपरः सर्व व्याख्याय निरस्यताम् ।

2. (a) देहस्यैकभौतिकत्वं चातुर्भौतिकत्वं च वादिनामनिर्देशसहितमुपपाद्य सिद्धान्तपक्षः समर्थनीयः । 16

(b) प्रामाण्यप्रामाण्ययोः स्वतत्त्वं वृत्तिकारणीया सूत्रीपन्यासेन समर्थ्यताम् ।

अथवा

(a) वेदस्यानित्यत्वपौरुषेयत्वे निराकरणीये ।

(b) आत्मनश्चिदानन्दस्वरूपत्वं मनसो विभुत्वं च तत्तद्वादिनामोक्तेस्त्वंपूर्वकं निरस्यताम् ।

3. अधोलिखितसूत्रेषु चतुर्णां वचनसंक्षेपेण व्याख्या विधेया :—

18

(a) न विज्ञानमात्रं बाह्यप्रतीतिः ।

(b) नासदुत्पादो नृशृङ्गवत् ।

(c) इयोः प्रधानं मनी लोकावदभ्यवर्गेषु ।

(d) प्रकृतेराज्ञस्यात् समस्तत्वात् पश्यवत् ।

(e) नोपदेशमात्रेण कृतकृत्यः परात्मज्ञादिते विरोधनवत् ।

(f) त्रिभिः सम्बन्धसिद्धेः ।

(g) नाग्यदाय्यातिः स्वयचीव्याघातात् ।

(h) नित्यत्वेऽपि नात्मनी योग्यत्वाभावात् ।

## SECOND HALF

Examiner—PROF. P. C. CHAKRABARTI, M.A., PH.D.

1.

Either,

Explain “प्रमेयसिद्धिः प्रमाणाद्धि”, and set forth the Pramāṇas maintained by the Sāṃkhya system, showing the validity of the remark— 12½

एतेषु प्रमाणेषु सर्वप्रमाणानि सिद्धानि भवन्ति ।

Or,

How would you proceed to establish the existence of Puruṣa as one distinct from the body? Examine the following argument as is put forward against the unity of soul :— 12½

“यद्येक एवास्मा स्यात्, तत एकस्य जन्मनि सर्वएव जायेरन्, एकस्य मरणे सर्वेऽपि म्रियेरन् ।”

2.

Either,

Give the sense of the following Kārikā according to the Bhāṣya :— 12½

धर्मेण गमनमूर्ध्वं गमनमधस्ताद् भवत्यधर्मेण ।

ज्ञानेन चापवर्गो विपर्ययादिष्यते बन्धः ॥

Comment on ऊर्ध्वं and अधवर्गः.

Or,

Give the substance of the following in your own words :— 12½

(a) यत्र ज्ञाने भूतानां वैकारिकाणां स्थित्युरपत्तिप्रलयाद्विनाशे विचार्यन्ते, येषां विचारात् सम्यक् पञ्चविंशतितत्त्वविवेचनात्मिका संपद्यते संवित्तिरिति ।

(b) तज्ज्ञात् कारणात् पुरुषो न बध्यते नापि मुच्यते नापि संसरति, यज्ज्ञात् कारणात् प्रकृतिरेव नानाशया बध्यते मुच्यते संसरति चेति । अथ मुक्त एव स्वभावात् सर्वगतश्च कथं संसरति ? अप्रामप्रापयार्थं संसरणमिति ।

3. Translate any three extracts into English :—

25

(a) एवं वेदमूलकधृतीतिहासपुराणवाक्यजनितमपि ज्ञानं युक्तम् । आदिबिदुषश्च कपिलस्य कल्पादौ कल्पान्तराधोऽस्तित्त्वाखण्डनसमभवः । सुप्तप्रवृत्तस्यैव पूर्वैर्युरवगतानामर्थानामपरिदुः । तथाचावद्यजैर्गोषव्यं संवादि भगवान् जैर्गोषव्यो दशमहाकल्पवर्त्तिजन्मकारणमात्मन उवाच—“दशसु महाकल्पेषु विपरिवर्त्तमानेन सत्ये”त्यादिना गम्यसन्दर्भेण ।

(b) प्रलयकाले महदादिसूक्ष्मपर्यन्तं करणीयैतं प्रधानं लीयते, असंस्मरन्मुक्तं सत् आसर्गकालमेव वर्त्तते प्रकृतिमीदृक्स्थानवत् सत् संस्मरणादिक्रियस्त्वसमर्थमिति । पुनः सर्गकाले संसरति तज्ज्ञातिज्ञं सूक्ष्मम् ।

तत् सूक्ष्मशरीरं परित्यज्यैव प्राणव्यागवेलायां मातापितृजा निवर्त्तन्ते, मरणकाले मातापितृजं शरीरमिदं निवृत्त्य भूत्वादिषु प्रजीयते यथातत्त्वम् ।

(c) एकै धर्मे प्रकृता चर्याधर्मे वैराग्येऽप्ये ज्ञानेऽप्ये प्रकृताः, तत्त्वादयुगपत् प्रकृतेषु बहव इति सिद्धम् । त्रिगुणभावविपर्ययाच्च पुरुषबहुत्वं सिद्धम् ।

इह यो यश्चिन् शक्तः स तस्मिन्नेवार्थे प्रवर्तते, यथा कुलाखी घटस्य करके समर्थो घटमेव करोति न पटं रथं वा ।

(d) प्रकृतेरप्रत्यक्षत्वात् यत्कार्यं तत्कारणगुणपूर्वकम् । कार्यं च त्रिगुणात्मकमिति सामान्येन प्रकृतिसिद्धिः । आत्मनोऽप्रत्यक्षत्वेऽपि यत् सङ्गतं तत्परार्थमित्यसङ्गतः परः पुरुषः ।

कार्यकारणयोरेकत्वात् । घटाकारिण परिणतोऽपि सद्रूपतां न जहाति । न च सदसतीरेकत्वम् ।

(GROUP F)

### SIXTH PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

*Examiner—MM. PT. KUNJABEHARI TARKATIRTHA*

प्रथमस्य द्वितीयतृतीययोरिकस्य चतुर्थपञ्चमशेरिकस्य चीत्तरं करं व्यम् ।

१ । सांख्यमते बन्धः कस्य धर्मः कथं तस्योत्पत्तिः कीदृशं वा तस्य स्वरूपमिति सूत्रभाष्यज्ञ-  
चोभिः शङ्कासमाधानप्रदर्शनपूर्वकं प्रतिपादनीयम् । २०

२ । पुरुषेकत्वं पुरुषबहुत्वं वा सांख्याचार्यैरङ्गीकृतम् ? तत्र स्वपक्षसाधने युक्तिप्रमाणं  
वा कीदृशं ? १५

३ । प्रमाणलक्षणप्रतिपादकं सांख्यस्वसुहृत्स्य भाष्यानुसारिणी तद्व्याख्या लिख्यताम् । कानि  
वा प्रमाणानि सांख्यमतसिद्धानि ? १५

४ । पदार्थानामानन्तेन प्रातिस्विकरूपैः सर्वपदार्थेभ्यो विवेकज्ञानमेव न सम्भवतीति कथं  
सांख्यसारोक्तविवेकज्ञानस्य मीचोपयोगित्वं घटते ? १५

५ । सांख्यसारकारमते प्रकृतेः किं लक्षणम् ? पृथिव्यादिभूते वा तल्लक्षणं कथं न  
गच्छतीति विशेषतः प्रतिपाद्यताम् । १५

#### SECOND HALF

*Examiner—PT. BANAMALI CHAKRABARTI VEDANTATIRTHA, M.A.*

1. Quote the *Kārikā* which seeks to establish the proposition “सत् कार्यम्”. Explain the exact meaning of this proposition, and set forth each of the arguments adduced in its support. What are the positions of the *Naiyāyikas* and

*Vedāntists* in this matter? Which view appears to be the most reasonable, and why? 13

Or,

Reproduce in detail, the arguments which seek to establish the existence and manyness ( बहुत्व ) of *puruṣa*. What is *puruṣa*?

2. Explain (a) or (b) in Sanskrit, and translate (c) or (d) into English:— 4+8

(a) स्वल्पसङ्करः सपरिहारः सप्रत्यवमर्षः ।

(b) .....असक्तं नियतं महदादि सूक्ष्मपर्यन्तम् ।

.....लिङ्गम् ॥

(c) लिङ्गं व्याप्यं लिङ्गि व्यापकं । शङ्कितं सुमारोपितीपाधिः । राकारश्चैनं वस्तुस्वभावप्रतिबन्धं व्याप्यं येन च प्रतिबन्धं तदज्ञापकम् । लिङ्ग-लिङ्गि यद्व्यतिरेकं विषयवाचिना विषयिणं प्रत्ययमुपलक्षयति । धूमादिव्याप्यः बङ्गादिव्यापकः इति यः प्रत्ययः तत्पूर्वकम् । लिङ्गियद्व्यतिरेक-वर्तनीयम् । तेन च लिङ्गमस्यास्तीति पक्षधर्मज्ञानमपि दर्शितं भवति । तद् व्याप्य-व्यापक-भाव-पक्षधर्मज्ञानपूर्वकम् अनुमानम् इति अनुमानसामान्यं लक्षितम् ।

(d) इतयाव्यक्तमस्तीत्याह शक्तिः प्रवृत्तेः । कारणशक्तिः कार्यं प्रवर्तते इति सिद्धम् अशक्तात् कारणात् कार्यानुत्पत्तेः । शक्तिय कारणगता न कार्यस्याव्यक्तत्वादित्या । ..... अयमेव हि सिकताभ्यस्तिलानां तैलोपादानानां भेदो यदेतत्त्वं तैलमस्यनागतावस्थं न 'सिकतासु । .....

यानि च यद्रूपसमनुगतानि तानि तत्स्वभावाव्यक्तकारणकानि यथा सङ्क्षेपपिण्डसमनुगता घटमुकुटादयो सङ्क्षेपपिण्डाव्यक्तकारणकाः इति कारणमस्यव्यक्तं भेदानाम् ।

3. Translate into Sanskrit one of the two following passages:— 25

(a) God means the eternally sustaining Spirit of the universe. Of God's existence we have the same sort of proof as we have of the existence of other conscious agents like ourselves, when we say we 'see' them. Of course we never see, and never can see, another human spirit, even when his body is present to our senses: we can only perceive the visible and tangible appearances behind which reason obliges us to recognize an invisible individual spirit, numerically different from our own . . . . Similarly, the phenomena of sense reveal to us the thoughts of the Supreme Spirit that are embodied in physical laws; His presence is universal, and always active, while finite spirits only act within a circumscribed sphere, and at intervals.

(b) You are fortunate if you love trees, and especially the wild ones growing where the Great Creative Force placed them, and independent of man's care. When you are in the forest or mountains, where every trace of man's work is left behind you feel an indescribable exhilaration and freedom that you do not realize elsewhere.

The wild tree is not irresponsive or regardless of your love, provided it is *real*. The spirit of the tree feels it. You are a part of the Infinite Mind, so is the tree. It has its share of life and intelligence. You have a far greater share, which is to be greater still—and then still greater. Whoever can retire for periods to Nature's solitudes, and enjoy that solitude, will return among men with more power and new power. The Christ of Judea retired to the mountains to be reinforced by the Infinite.

## (GROUP E)

## SEVENTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner—MM. PT. SITARAM SASTRI*

*The FIRST question and ANY TWO of the remaining questions are to be answered.*

1. जातिदेशकालव्यवहितानामव्यानर्थं क्षुतिसंस्कारधीरेकपत्वात् । यद्वयस्वरूपाश्रिताव-  
धायेवसुसंयमादिन्द्रियजन्यः । सत्पुरुषधीरत्यन्तासङ्कीर्णयोः प्रत्ययविशेषी भोगः परार्थत्वात्सार्ध-  
संयमात्पुरुषज्ञानम् । तत्र निरतिशयं सर्वज्ञ-बीजम् । 20

यथाभाष्यमेतानि सूत्राणि व्याख्यायन्ताम् ।

2. वर्षः पुनरेकैकः पदात्मा सर्वाभिधानशक्तिप्रदितः सङ्कारिवर्णान्तरप्रतियोगित्वाद्देशक्य-  
स्मिवापन्न पूर्वशीतरीणोत्तरश्च पूर्वेण विशेषेऽवस्थापित इत्येवं बहवो वर्षाः क्रमानुरोधिनोऽर्थसङ्केते-  
नावच्छिन्ना इत्यन्त एते सर्वाभिधानशक्तिपरिवृता गकारौकारविसर्जनौदाः साक्षादिमन्तमर्थं  
यौतयन्तीति । तदेतेषामर्थसङ्केतेनावच्छिन्नानामुपसंभृतध्वनिक्रमाणां य एको बुद्धिनिर्भाससात्पदं  
वाचकं वाच्यस्य सङ्केत्यते । 15

अयं भाष्यसन्दर्भः सप्रसङ्गं व्याख्येयः । मतान्तरप्रामिसम्भवे तस्यपि उल्लेखः कार्यः ।

3. चित्ते नैव विषयाणां स्वस्य च भानसम्भवे न तदतिरिक्तपुरुषस्वीकारावश्यकत्वं ससूक्ष्मे स्वं  
संसाध्यताम् । 15

ज्ञानातिरिक्तपदार्थास्वीकर्तृमतं सम्यक् निरुध्य योगरीत्या तत्समाधानमुच्यताम् । के चात्र  
पूर्वपक्षिनः ?

4. जीवेश्वरयोर्विषये अंशश्रिवादस्य, अवच्छेदवादस्य प्रतिबिम्बवादस्य च स्वरूपं  
यथाटीकमुल्लिख्य टीकाज्ञदभिमतः सिद्धान्तः प्रदर्श्यताम् । 15

5. वृत्तिसाध्यमितरवेत्यत्र टीकायामुच्यमानं बुद्धिपुरुषयोर्वृत्तिसाध्यं सम्यक् निरुध्य,  
'कथंचित्त्वाधीयमानमपि गोमशपायसीयन्यायमाचिपतीति' भाष्यसन्दर्भटीकाज्ञद्वीत्या . सप्रसङ्गं  
व्याख्यायताम् । 15

## SECOND HALF

*Examiner—PT. KOKILESWAR BHATTACHARYYA, SASTRI, M.A.*

*Marks :—25+25*

1. Show that in the Sāṅkhya-Yoga view of *error* ( *सन्ध्याति* ) it is incom-  
plete knowledge, not wrong knowledge, i. e. *अवध्याख्याति*, that gives rise to error.



In this connection, explain the following भोजवृत्ति:—

“यद्यपि प्रकृत्या सङ्गं अनदिर्नेसर्गिकोऽस्य ( पुरुषस्य ) भोग्य-भोक्तृत्वलक्षणः सम्बन्धः अविवेकस्यातिमूलः तस्मिन् सति, तत एव सर्वस्य व्यवहारस्य निष्पत्तेः, किमन्यैः कल्पनाजल्पैः ? यदि पुनः पारमार्थिकमात्मनः कर्तृत्वाद्यङ्गीक्रियेत तदाऽस्य परिणामित्वप्रसङ्गः ।”

2.

Either,

10

यैरपि नैयायिकादिभिरात्मा चेतनाद्योगाच्चेतन इत्युच्यते, चेतनापि तस्य मनःसंयोगजा । इच्छाज्ञानप्रयत्नादयो गुणास्तस्य आत्ममनःसंयोगादुत्पद्यन्ते । तेषामयुक्तः पक्षः ।—

How does भोज show that the position ( पक्ष ) of the *Naiyāyikas* is अयुक्त ( invalid ) ?

Or,

Explain after the Bhoja-vṛtti either of the following Aphorisms :— 10

(a) एतेन भूतेन्द्रियेषु धर्म-लक्षणावस्थापरिणामाः व्याख्याताः ।

(b) सति मूले तद्विपाकी जात्यायुर्भोगाः ।

3. Describe the characteristics of the higher form of Samādhi ( समाधि ). 5

4. Translate into English :—

25

का नामासौ कर्तृत्वात् जात्यन्तरभूता भोक्तृत्वविशिष्टा विक्रिया, यती भोक्तैव पुरुषः कल्प्यते न कर्ता ; प्रधानन्तु कर्त्तव्यं न भोक्तिरिति ? ननु उक्तं पुरुषचिन्मात्र एव ; स च स्वात्मस्थो विक्रियते भुञ्जानी, न तत्तन्त्रपरिणामेन । प्रधानन्तु तत्तन्त्रपरिणामेन विक्रियते । अतोऽनेकमशुद्धमचेतनञ्च इत्यादिषर्कवत् ; तद्विपरीतः पुरुषः । नासौ विशेषी वास्मात्त्वान् । प्राग्भोगोत्पत्तेः केवलचिन्मात्रस्य पुरुषस्य भोक्तृत्वं नाम विशेषी भोगोत्पत्तिकाले चेत् जायते, निवृत्ते च भोगे पुनस्तद्विशेषादपेतचिन्मात्र एव भवतीति चेत्, मद्ददाद्याकारिण च परिणम्य प्रधानम्, ततोऽपेक्ष्य पुनः प्रधानस्वरूपेण अवतिष्ठते इत्यस्यां कल्पनायां न कश्चिद्विशेष इति वास्मादेव प्रधान पुरुषयोः विशिष्टविक्रिया कल्प्यते । अथ भोगकालेपि चिन्मात्र एव प्राग्वत् पुरुष इति चेत्, न तर्हि परमार्थतो भोगः पुरुषस्य ।

## (GROUP E)

## EIGHTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner—PROF. P. C. CHAKRABARTI, M.A., PH.D.*

१। “यत् सत्तत् चणिकं यथा जलधरः सन्तस्य भावा जसौ १८

सत्ताशक्तिरिहायैककर्मणि मितेः सिद्धेषु सिद्धा न सा ।

नाऽप्येकैव विधाऽन्यथापरकृतेनापि क्रियादिर्भवेद्-

हेधाऽपि चणभङ्गसङ्गतिरतः साये च विद्याम्यति ॥”

कारिकेयं विशदं व्याख्यायताम् । चणभङ्गवादितेऽपि सा सिद्धवस्तुष्वेव कथमुक्तं सिद्धेषु सिद्धा न सेति ? प्रतिपत्ते “यत् सत्तदचणिक”मिति वाऽनुमानं कथं न सम्भवति ? एतत् सर्वं विशदीकृत्य प्रदर्शयताम् ।

२। ज्ञानाङ्गिनी न चाभिनी भिन्नाभिन्नः कथञ्चन । १६

ज्ञानं पूर्वापरीभूतं सोऽयमात्मेति कीर्त्तितः ॥

किमर्थमिदं कारिका समुच्चृता ? “ज्ञानं पूर्वापरीभूत”मित्यर्थार्थं विशदं कृत्वा कारिकेयं व्याख्यायताम् । सोऽयमित्यत्र तरपदेन कः परावृणोते ?

अथवा,

प्रत्यक्षतोऽनुमानतश्च शुद्धाद्वैतमतसिद्धमनादिभावरूपमज्ञानं विशिष्टाद्वैतमतीकयुक्तिभिर्निरस्यताम् ।

१६

३। विभागजविभागस्य भेदं निर्दिश्य यथा तत्र तत्र विभागस्य कारणत्ववृत्तिः स्थलप्रदेशेन-पूर्वकं शन्यीकृतादिशा तथा प्रदर्शयताम् । १६

अथवा,

अधिकरणभेदान् नामतो निर्दिश्य “स्वाध्यायीऽष्टेतव्य” इति विधिवाक्यादेव यथा मीमांसा-शास्त्रमारम्भणीयं भवति तथा गुरुमतमनुसृत्य शन्यीकृतादिशा विचार्य प्रतिपादयताम् । १६

## SECOND HALF

*Examiner—DR. AMARESWAR THAKUR, M.A., PH.D.**Attempt THREE questions, of which Question 5 must be one.*

1 नीचशास्त्रे कस्याधिकारः ? ज्ञानकर्त्तृणोः कः सम्बन्धः ? कथा दिशा च प्रतिपादितः ? 12½

2. बाह्यगर्हां यौवनगर्हां बाधित्वं कथिन्नित्यं विरच्यताम् । 12½
3. के तावन्निश्रेयसविरोधिनी भावाः ? कथं वा सर्व्वेषां भावानां विपर्य्याससिद्धिः ? 12½
4. (a) ज्ञाता ज्ञानं तथा ज्ञेयं द्रष्टा दर्शनदृश्यम् ।  
कर्ता हेतुः क्रिया यस्मात्तच्चैः ज्ञप्तात्मने नमः ॥ 12½
- (b) विकल्पकल्पनानल्पजल्पितैरल्पबुद्धिभिः ।  
मदैकद्वयैरतां नीतः संसारकुहरे धमः ॥
- (c) चित्तं कारणमर्थानां तस्मिन् सति जगत्तयम् ।  
तस्मिन् चोणं जगत् चोणं तच्चिकित्स्यं प्रयत्नतः ॥  
विशदं व्याख्यायन्तामिमी श्लोकाः ।

5. Translate into Sanskrit :—

25

This object is attained as soon as the *puruṣa* recognizes its entire distinctness from the *prakṛti*. This separateness has existed in fact from the beginning, but unknown to itself ; when once this knowledge has been gained, none of the sufferings of the universe are any longer its sufferings. But they are also no longer those of *Prakṛti*, since all the latter's sufferings, as soon as it ceases to be 'reflected' in the *puruṣa* or 'enlightened' by him, are no longer experienced and consequently are no longer sufferings. Deliverance is found in the dissolution of this bond between *puruṣa* and *prakṛti*, which has only an apparent existence from eternity. For the *puruṣa* this consists merely in its ceasing to illuminate the sufferings of *Prakṛti* ; for *Prakṛti*, on the other hand, in that its sufferings are no longer illuminated, consequently are no longer experienced, and therefore cease to be sufferings.

## PĀLI

### FIRST PAPER.

Examiner— MR. S. N. MITRA M.A.

*The questions are of equal value.*

*Six questions only are to be attempted, including Nos. 9 and 10.*

1. What information do your Nikāya texts contain about the life and culture of ancient Brahmins long before the time of Gotama Buddha ? In what respects were they, in Buddha's judgment, superior to the contemporary Brahman teachers ?

2. Classify into their different types the sixty-two dogmas mentioned in the Brahmajāla Sutta. How do these views differ from the view advocated by Buddha ? Have they any bearing upon the life of a Bhikkhu ?

3. Explain fully and criticize the views of Makkhali Gosāla and Ajita Kesakambali. Does the Brahmajāla Sutta throw any light upon them ? Illustrate your answer by referring to passages.

4. What information do your texts furnish on class-distinction in ancient India? What were the tests prescribed by Buddha for determining class-superiority?

5. Define 'Satipaṭṭhāna', fully bringing out its connotation as a graduated code of mental training. Explain fully 'Dhammesu Dhammānupassanā'.

6. Account for the title of the Mahāsīhanāda Sutta, otherwise known as 'Lomaṃsaṇa-pariyāya'. and discuss fully the aim and object of the Sutta.

7. What are the characteristic marks of an upāsaka? Was there any distinct Buddhist lay society in Buddha's time? Was Pasenadi an upāsaka? If so, portray his character as such.

8. Write biographical or explanatory notes on any FOUR of the following :—

(a) Pokkharasādi, (b) Ajātasattu, (c) Okkāka, (d) Siṅgāla, (e) Rājā Cakkavatti, (f) Jātivāda.

9. Explain in Pāli :—

Paṇḍito sīla-sampanno saṃho ca paṭibhānavā |  
nivāta-vutti atthaddho, tā'iso labhate yasam |  
Uṭṭhānako anala-o, āpadā-u na vedhati |  
acchidda-vutti medhāvī, tādiso labhate yasam ||  
Saṅgāhako mitta-karo, vadaññū vīta-maccharo |  
netā vinetā anunetā, tādiso labhate ya aṃ ||

10. Translate into idiomatic English extract (a) and ONE of the rest :—

(a) Seyyathā pi inahārāja maṇi veluriyo subho jātima atthaṇso suparikamma-kato accho vippasanno anāvalo sabbākāra-sampanno, tatra suttam āvutṭam nilam vā pītam vā lohitam vā odālam vā paṇḍu-suttam vā. Tameva cakkhumā puriso hatthe karitvā paccavekkheyya : 'Ayaṃ kho maṇi veluriyo subho jātima atthaṇso suparikamma kato accho vippasanno anāvalo sabbākāra-sampanno, tatridam suttam āvutṭam nilam vā pītam vā lohitam vā odātam vā paṇḍusuttam vāti.' Evameva kho mahārāja bhikkhu evam samāhite citte parisuddho pariyodāte anāgaṇe vigata-upakkilesa mudubhūte kammaniye thite ānejjappate nānadassanāya cittam abhinīharati abhininnūmeti. So evam pajānāti : 'Ayaṃ kho me kāyo rūpī cātummahābhūtiko mātā-pettikasambhavo odanakummāsa-upacayo anicca-ucchādana-parimaddana-bhedana-viddhamāsa-dhammo, idaṇi pana me viññānam ettha sitam ettha paṭibaddham' ti.

(b) Sabbam lokam abhiññāya sabbaloke yathā tathā |  
sabbaloka-visamvutto sabbaloke anūpayo ||  
Sa ve sabbābhikhū dhīro sabbagantha-pamocano |  
phuṭṭha'ssa paramā santi nibbānam akutobhayaṃ ||  
Esa khināsavo Buddhō anigho chinnaśamsayo |  
sabbakammakkhayaṃ patto vimutto upadhisāṅkhaye ||  
Danto damayataṃ settho santo samayataṃ isi |  
mutto mocayataṃ aggo tiṇṇo tiragataṃ varo ||

(c) Dhaññam dhamam rajataṃ jātārūpaṃ,  
pariggahaṃ vā pi yadatthi kiñci |  
dāśā kammakarā pessa ye c'assa anujivino |  
sabbam nādaya gantabbam, sabbam nikkhippagāminam ||  
Yañca karoti kāyena, vācāya uda cetasā |  
tam hi tassa sakam hoti, tañca ādaya gacchati |  
tañc'assa anugam hoti, chāyā va anupāyini ||  
Tasmā kareyya kalyāṇam, nicayam samparāyikam |  
puññāni paralokasmiṃ paṭiṭṭhā honti paṇiṇam ||

## SECOND PAPER

## FIRST HALF.

Examiner—PROF. B. M. BARUA, M.A., D.LITT.

*The questions are of equal value.*

Attempt THREE questions only, including Question 1 which is compulsory.

1. Translate into idiomatic English any two of the subjoined extracts, adding short explanatory notes where necessary :—

(a) Pātur ahosi Magadhesu pubbe  
dhammo asuddho samalehi cintito,  
apāpur etaṃ amatassa dvār ṇṇ  
supantu dhammaṃ vimalenānubuddhaṃ |  
sele yathā pabbatamuddhani t̥hito  
yathāpi passe janataṃ samantato  
tathūpamaṃ dhammamayaṃ sumedha  
pāsādam āruhya samantacakkhu  
sokāvatiṇṇaṃ janataṃ apetasoko  
avekkhassu jātijaṇṇibhūtaṃ ||

(b) Kim eva disvā Uruvelavās : pahāsi  
aggīṃ kisako vadāno  
pucchāmi taṃ Kassapa etaṃ atthaṃ,  
kathaṃ pahīnaṃ tava aggibutaṃ ?  
Rūpe ca sadde ca atho rase ca  
kūmitthiyo cābhivadanti yaṇṇā  
etaṃ malan ti upadhiṣu t̥atvā  
tasmaṃ na yit̥the na hute araṇṇijjīṃ.

(c) Sacco bhikkhave aññatitthiyapubbo naggo āgacchati, upajjhāyamūla-  
kaṃ cīvaraṃ pariyesiṭabbam. Sace acchinnakaso āgacchati, saṃgho  
apaloketabbo bhaṇṇukamāyā. Ye te bhikkhave aggikā jaṭṭakā, te āgatā  
upasampādetabbā, na tesāṃ parivāso dātabbo.

(d) Atha kho Rāhulamūtā devī Rāhulakumārāṃ etda avoca : Eso te  
Rāhula pitā, gacchassu dāyajjaṃ yācāhi ti. Atha kho Rāhulo kumāro  
bhagavantam piṭṭhito piṭṭhito anubandhi, dāyajjaṃ me samaṇa dehi, dāyajjaṃ  
me samaṇa dehi ti. Atha kho Bhagavā āyasmantaṃ Sāriputtaṃ āmantesi ;  
tena hi tvaṃ Sāriputta Rāhulakumārāṃ pabbājehi ti.

2. Professor Oldenberg observes : 'Looking at what is essential in the Vinaya-Piṭaka, we may define it as a collection of rules regulating the outward conduct of the Saṃgha and Bhikkhus. It does not therefore deal with purely ethical questions, except so far as these affect such outward conduct ; nor does it deal with outward conduct generally, but only with the outward conduct of the Saṃgha and the Bhikkhus'.

Examine this statement, giving your own views on the point at issue.

3. Show how the *khandhakas* and the *vibhaṅgas*, as embedded in the Vinaya-Piṭaka, constitute two distinct elements, each with a specific purpose of its own.

4. Wherein lies the relevancy of an account of Buddha's life and a connected history of the Saṃgha in the text of the Mahāvagga, of which the main subject-matter is concerned with the rules of conduct ?

5. What does the term Saṃgha connote and denote ? Show that the organization of the Buddhist Saṃgha came by degrees under the pressure of varying circumstances.

6. What is meant by the *uposatha* ceremony? Discuss its importance as a practical test of strength and unity of the Saṅgha as a whole.

7. Write explanatory and critical notes on any FOUR of the following :—

Pabbajjā, upasampidā, pātimokkhuddesa, gaṇamaggena vā gaṇetum salākaṃ vā gahetum, codanāvattū.

## SECOND HALF

Examiner—PROF. VIDHUSEKHAR SASTRI

*The figures in the margin indicate full marks.*

1. *Either,* 16

(a) What is the meaning of the term Pātimokkha? Trace the gradual growth of the Pātimokkha rules.

(b) What offences are termed Pārājikā, and why?

*Or,*

Give your estimate of the Pātimokkha as a code of discipline setting forth the purpose for which it was formulated and enforced.

2. Translate into idiomatic English the text given below, explaining the meaning and purpose of the Saṅghādisesa rules. Explain also the procedure of expiation recommended in the subjoined extract :— 20

Uddiṭṭhā kho āyasmanto terisa saṅghādisesā dhammā nava paṭhamāpattikā cattāro yāvattatīyakā yesaṃ bhikkhu aññataraṃ aññataraṃ vā āpajjitvā yāvatihaṃ jānaṃ paṭicchādeti tāvatihaṃ tena bhikkhunā akāma parivatthabbaṃ. parivutthaparivāḥena bhikkunā uttariṃ chārattūṃ bhikkhu-mānattāya paṭipajjitabbaṃ. cinnamānatto bhikkhu yattha siyā vīsatiṃ gaṇo bhikkhusaṅgho tattha so bhikkhu abbhetaḥ.

3. Write explanatory notes on (a) and any FOUR of (b) :— 6+8

(a) (i) gaṇabhojana aññātra samayā pacittiyaṃ.

(ii) taṃ ce aññātako gaḥapati gaḥapatānī vā bahūhi civarehi abhihaṭṭūṃ pavāreyya s'antar'uttaraparāmaṇaṃ tena bhikkhunā tato civaraṃ sāditaḥ.

(b) (i) sikkhāsāṃjīvasamāpanna, (ii) maraṇāya vā samādapēyya, (iii) sahadhammikaṃ vuccamāno, (iv) āsano alaṃkammaniye, (v) sugatacivarappa-māṇaṃ, (vi) paramparābhojanaṃ, (vii) sāmambhaṃ vatthu.

## THIRD PAPER

### FIRST HALF

Examiner—DR. AMARESWAR THAKUR, M.A., PH.D.

*The figures in the margin indicate full marks.*

1. (a) Render into Prakrit :—

10

(i) भगवति तमसे अयं तावत् ईदृशी जातः ।

(ii) एष स मङ्गराजस्य हृदयानन्दः वत्सायाः पिता ।

(iii) असदृशं खलु एतद् वचनम् असा इतानसा ।

(iv) हा विक्, हा विक् तानि एव चिःपरिचितानि अचराणि ।

(b). In what kind of Prakrit is the following passage written? Give reasons for your answer: 6

एकत्रिंशं दिशं खलुशो लोहिचमक्के मए कपिदे, जाव तश चदलबभनले एदं  
खदभमायुलं अङ्गुलीयधं देक्खिधं । पक्खा अक्के शे विक्कपाच दंशयन्ते गहिदे भावमिशिहि ।

(c) Note some peculiarities of Pali euphony. 4

2. Either,

(a) What distinction do you notice between *Māhārāṣṭrī* and *Sauraseni* as regards phonetic peculiarities, declension, verbal forms, and indeclinables? 10

(b) Give Pali and Prakrit examples of gerunds, metathesis, and passives. 6

(c) Write a short note on the peculiarities of Prakrit gender. 4

Or,

(a) Give Pali equivalents of :— 5

सयः, सिम्भ, भीड्य एतर्हि, and स्थिति ।

(b) How are Sanskrit Gutturals and Dentals represented in Pali, when conjoined with Y? 10

(c) Comment on the following forms :— 5

भुत्तावी, पापिच्छक, करावेद, कच, and दृश्यद ।

3. (a) What do you know of the date and authorship of the *Vuttodaya*? Name some commentaries on it and, if possible, some glosses on the commentaries. .

(b) Give the definition of any FIVE of the following metres :  
Campakamālā, Dodhaka, Sālinī, Indavaṇṇasī, Toṭaka, Sasikalā, Sikharinī, and Saddharā. 10

(c) Scan one of the following stanzas, naming the metre :— 5

(i) Lābhā vata no anappakā yo mayam bhagavantam addasāma |  
saraṇam tam upama cakkhuma satthā no hohi tuvaṃ mahāmuni ||

(ii) Saco labhetha nipakaṃ sahāyaṃ saddhimcaram sādhuvihāri-  
dhiraṃ |  
abhibhuṇṇa sabbāni parissayāni careyya tonattamano satīmā ||

(iii) Kodhano upanāhi ca pāpamakkhī ca yo naro |  
vipannadiṭṭhī māyāvi tam jaṇiṇā vasaḷo iti ||

## SECOND HALF

Examiner—MR. S. N. MITRA M.A.

PALI PHILOLOGY.

Marks—40.

The questions are of equal value.

Answer only THREE questions from this half.

1. Indicate the place of Pali in the history of Indo-Aryan, making

clear its position with regard to the 'Prakrits' on the one hand and the dialects of the Asoka inscriptions on the other.

2. Write a note on the home-land of Pali, discussing various opinions on the question.

3. Discuss the various strata in the development of Pali.

4. Explain four of the following terms, with suitable examples where necessary: *Māgadhisms*, *Cerebralisation*, *Anaptyxis*, *Semi-tatsamas*, *Palatisation*, *Attanopada* and *Parassapada*, *Aorist Tense in Pali*, *Thematic Conjugation*, *Euphonic Glides*, *Periphrastic Formations*.

5. Write notes on two of the following:—

- (i) Treatment of Old Indo-Aryan *r* in Pali.
- (ii) Vowel-lengthening and Consonant-doubling in Pali.
- (iii) Pali Numerals—Cardinal and Ordinal.
- (iv) Pali Gerunds.
- (v) The Pali innovations in the Declension of the Noun.

6. Explain FIVE of the following words in their phonology or morphology: *ḍiḡha* (in place of *ḍiḡgha*); *nīḍḍa* (in place of *nīḍa*); *seyyā*; *acchera*; *tikhiṇa* (beside *tikkha*); *kusināra*; *rukura*; *kusita*; *Lāla-raṭṭha*; *makasa*; *gini*; *paggharati*; *tissā*; *labbhare*; *kūhasi*; *adāsi akāsi akkocchi*; *balasā* (instr. of *bala*); *tikkhattum*.

#### FOURTH PAPER

Examiner—DR. N. DATTA, M.A., PH.D., D.LITT.

*The questions are of equal value.*

*Answer SIX questions only.*

1. 'The commentaries describe the language of the Pāli canon as Māgadhī.' State your own views, giving reasons.

2. Describe the literary arrangement of the first four Nikāyas, and point out characteristic differences in the several parts.

3. What were the chief schisms in the Buddhist community before Aśoka, and to what were they due?

4. In what works and in what schools do we find the first traces of Mahāyāna?

5. Compare Aśoka and Kaniṣka as patrons of Buddhism.

6. 'The transition of the saṅgha from a monarchical type to a republican, its passing somehow, when the teacher dies, into a confederacy of independent members existing side by side, is wholly unknown to the religious system of the Brahmans.' Examine this statement of Prof. Oldenberg.

7. What was the position of women in Buddha's time? What part did they play in early Buddhism?

8. Discuss the various conceptions of Nirvāṇa as found in Pāli or in Mahāyāna texts.



9. Trace the course of expansion of early Buddhism.

10. How do the Chinese pilgrims bear testimony to the decadence of Buddhism in India? Mention the causes that led to its disappearance from the land of its birth.

11. What circumstances favoured the growth of Buddhism into an all-Asiatic religion?

(GROUP A.)

### FIFTH PAPER.

Examiners— { PROF. B. M. BARUA, M.A., D.LITT.  
MR. G. D. DE, M.A.

*All questions are of equal value.*

*Attempt SIX questions only, including Questions 7 and 8, which are compulsory.*

1. Trace the origin and development of Jātakas, noting in particular the changes which took place in their titles and form.

2. Discuss the difference in language and avowed purpose of the verse and prose in the Jātakas, pointing out some of the salient features of both by which their antiquity may be established.

3. What is the difference between a Jātaka and an Apadāna? Can the Mahā-apadāna Suttanta be technically called a Jātaka?

4. What are the literary sources of the Jātakas found on the Bharhut railing? What are the remarkable features about them as depicted in the stone?

5. Note the different parts played by the Bodhisatta in the Jātakas.

*Or,*

Give a life-sketch of Buddha as depicted in the Bharhut sculpture.

6. Write explanatory notes on any FOUR of the following :—

(a) Sakkatta-Māratta-Brahmādiṃ.

(b) Isiṃṅo pi jhānakīlaṃ kīlanto Himavanta-padese vīsaṃ kappesi ghoratapo parimāvitindriyo ahoṣi.

(c) Assamassa mama brahme samīpe Gandhamādana.

(d) Eko ahetuvādi eko issarakāraṇavādi eko pubbekata-vādi eko-uccheda-vādi eko khattavijjā-vādi.

(e) anaṇassa hi pabbajjā etaṃ isihi vaṇṇitaṃ.

(f) Mahāsatto piṇḍāya caranto usukārassa gehadvāraṃ patto, Sīvālī pi ekamantaṃ aṭṭhāsi.

(g) nāgarāje supaṇṇe ca maṇimhi passa nimmitaṃ.

(h) Mithilāya pana catusu dvāresu pācinayavamaṃjhaḥko dakkhinaya vamaṃjhaḥko pacchimayavamaṃjhaḥko uttarayavamaṃjhaḥko ti cattāro nigamā.

## 7. Explain in Pāli :—

Bahu hi me dantayugā ulārā  
   ye me pitunnaṃ pi pitāmahānaṃ  
 Jānāti sā kodhanā rājaputtī  
   Vadhatthikā viram akāsi bālā  
 Uṭṭhehi tvam ludda khuraṃ gahetvā  
   dante ime chinda purā marāmi  
 vajjāsi taṃ kodhanaṃ rājaputtiṃ  
   nāgo hato, handa imasta dantā ti.

Or,

Briefly narrate in Pāli the atītavatthu of the Temiya Jātaka.

## 8. Translate into English any TWO of the following extracts :—

(a) Atīte Himavati Chaddanta-dahaṃ upanissāya aṭṭhasahassā hatthi  
 nāgā vasimpu iddhimanto vehāsayamgamā. Tādā Bodhisatto jeṭṭhakavāraṇassa  
 putto hutvā nibbatti, so sabbaseto ahosi rattamukhapādo. So aparabhāge  
 vuddhippatto aṭṭhāsītihatthubbedho ahosi viṣamratanasatāyāmo aṭṭhapappā-  
 sahatthāya rajatadāmasadisāya soṇḍāya samannāgato, dantā paṇ'assa  
 parikkhepato papparasahatthā ahesuṃ dighato tiṃsahatthā chabbappāhi  
 rasmīhi samannāṇatā. So aṭṭhannam nāgasahassānaṃ jeṭṭhako ahosi,  
 paccakabuddhe pūjesi.

(b) Suvijānaṃ sigālānaṃ sakuntānaṃ ca vassitaṃ |  
 manussavassitaṃ rājā dubbijānataraṃ tato ||  
 Api ce maññāti poso ñātimitto sakhā ti vā |  
 yo pubbe sumano hutvā pacchā sampajjate diso'ti ||  
 Kāmaṃ janapado māsi raṭṭhaṇ cā pi vinassatu |  
 na tv-evūhaṃ ruruṃ dubbhe datvā abhayadakkhiṇaṃ ||  
 Mā me janapado āsi raṭṭhaṇ cā pi vinassatu |  
 na tv-evūhaṃ migarājassa varaṃ datvā musā bhane ti ||

(c) So pabbhātīya rattiyā Mahāsattassa tussitvā, na yuttaṃ imaṃ  
 kapirārājānaṃ nāsetuṃ. upāyena naṃ otāretvā paṭijaggissāmīti Adhogaṅgāya  
 saṃghātāṃ ṭhapetvā tattha aṭṭhakaṃ bandhūpetvā saṅkamaṃ Mahāsattaṃ  
 otārāpetvā piṭṭhiyaṃ kāsāvavatthaṃ pattharāpetvā Gaṅgodakena nahāpetvā  
 phānitodakaṃ piyevā parisuddhasariraṃ saḥassapūkatelena abbhāñjāpetvā  
 sayanapiṭṭhe telacammaṃ pattharāpetvā tattha taṃ nipajjāpetvā attanā nice  
 āsane nisiditvā paṭhamāṃ gāthāṃ āha ;

Attānaṃ saṃkamaṃ katvā yo sotthiṃ samatāraye |  
 kiṃ tvāṃ tesāṃ kimo tuyhaṃ honti ete mahākapi ti ||

(GROUP A)

## SIXTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

Examiner—PROF. B. M. BARUA, M.A., D.LITT.

1. Give the gist of any two of the following extracts, elucidating the arguments by which Buddhaghosa establishes his own interpretation :— 18

(a) Keci pana paṭicca sammā ca tittiya-parikkappa-pakatipurisādi-  
 kāraṇa-nirapekkho uppādo paṭicca-samuppādo ti evaṃ uppādamattaṃ

paṭiccasamuppādo ti vadanti. Tam na yujjati. Kasmā? Suttābhāvato suttavirodhato gambhiranayā sambhavato saddabhedato ca.....uppādamattam paṭiccasamuppādo ti vadantassa padasavihāra-suttavirodho āpajjati. Tathā kaccānasuttavirodho. Kaccānasuttepi hi Lokasamudayaṃ kho Kaccāna yathābhūtam sammāpaṇīṇāya pasato yā loke natthitā sī na hoti ti anuloma-paṭiccasamuppādo lokapaccayato lokasamudayo ti uccchedaditṭhisamugghā tattham pakāṣito : na hi uppādamattadassanena uccchedaditṭhiyā samugghāto hoti paccayānuparamadassanena pana hoti paccayānuparama phalānuparamo ti.

(b) Kasmā pan' ettha avijjā ādito vuttā? Kim Pakativādinam pakati viya avijjā pi akāraṇaṃ mūlakāraṇaṃ lokassāti? Na akāraṇaṃ. Āsavaśamudayā, avijjāśamudayo ti hi avijjāya kāraṇaṃ vuttam. Atthi pana pariyaḇo yena mūlakāraṇaṃ siyā. Ko pan eseti? Vattakathāya sisābhāvo. Bhagavā hi vattakathāṃ kathento dve dhamme sīsaṃ katvā katheti avijjaṃ vā. Yathāha : Purimā bhikkhave koṭi na paṇīṇiyati avijjāya, ito pana avijjā nāho si atha paccā sambhavī ti evaṇcetam bhikkhave vuccati. Atha ca pana paṇīṇiyati idappaccayā avijjā ti.

(c) Yo pan' etam yathābhūtaḇassanaṃ pahāya satto atthiti gaṇhāti so tassa vināsaṃ anujāneyya avināsaṃ vā? Avināsaṃ anujānanto sassato patati, vināsaṃ anujānanto uccheḇ patati. Kasmā? Khīranvayassa dadhino viya taḇanvayassa aṇīṇassa ābhāvato. So sassato satto ti gaṇhanto oliyati nāma, uccijjatiṭi gaṇhanto atidhāvati nāma. Ten āha Bhagavā : Dvīhi bhikkhave ditṭhigataḇhi pariyaṭṭhitā devamanussā oliyati eke atidhāvati eke.

(d) Na hi mahārāja nibbānaṃ dukkhena missaṃ, ekantasukhaṃ nibbānaṃ. Yaṃ pana tvaṃ brīsi : Nibbānaṃ dukkhaṃ ti n'etam dukkaṃ nibbānaṃ nāma, nibbānassa pana sacchikiriyāya pubbaḇhāgo eso, nibbāna-pariyesanaṃ etam. Ekantasukhaṃ yeva nibbānaṃ, na dukkhena missaṃ.

(e) Bhante Nāgasena, dissanti loke kammanibbattā, dissanti hetunibbattā, dassanti utunibbattā; yaṃ loke akammajaṃ ahetujaṃ anutujaṃ tuṃ me kathohi ti. Dve 'me mahārāja lokasmiṃ akammajā ahetujā anutujā? Katame dve : ākāso mahārāja akammajo ahetujo anutujo, nibbānaṃ mahārāja akammajaṃ ahetujaṃ anutujaṃ. Mā bhante Nāgasena, jīnavacanaṃ makkhehi, mā ajānitvā paṇhaṃ byākarohi ti. Bhante Nāgasena, yuttaṃ idaṃ tva vattuṃ : ākāso akammajo ahetujo anutujo ti? Anekaśatohi pana bhante Nāgasena kāraṇehi Bhagavatā sāvakānaṃ nibbānassa sacchikiriyāya maggo akkhāto, atha ca pana tvaṃ ovaṃ vadesi : ahetujaṃ nibbānaṃ ti. Saccapa mahārāja Bhagavatā anekasatohi kāraṇehi sāvakānaṃ nibbānassa sacchikiriyāya maggo akkhāto, na ca pana nibbānassa uppāḇāya hetu akkhāto ti.

## 2. Explain fully any four of the following :—

16

- (a) Gihino vā haṃ bhikkhave pabbajitaśsa vā sammāpaṭipattiṃ vaṇṇemi.
- (b) Na hi mahārāja udakaṃ jīvati, n'atthi udako jīvo vā satto vā, api ca mahārāja aggisantūpavegassa mahantatāya udakaṃ ciccotiṇiyati.
- (c) Kusalam mahārāja adhimattaṃ balavataṃ, no tathā akusalan ti.
- (d) Nibbānaṃ na atītaṃ na anāgataṃ na paccuppannaṃ, na uppannaṃ na anuppannaṃ na uppāḇaniyaṃ ti.
- (e) Yo hi dhammo yassa dhammassa ṭṭhiyā vā uppattiyā vā upakārako hoti so tassa paccayo ti vuccati.
- (f) Khandhānaṃ ca paṭipāṭi dhātu-āyatanāna ca | abbhocchinnaṃ vattamānā saṃsāro ti pavuccati ||
- (g) Yamakaṃ nāmarūpaṃ ca ubho aṇīṇaṇṇanissitā | ekasmiṃ bhijjamānasmiṃ ubho bhijjati paccayā ||

8. Answer *any one* of the following :—

16

(a) Ascertain the chronological position of the Visuddhimagga among the commentaries of Buddhaghosa.

(b) How far can it be shown that the questions of Upatissa-Sāriputta in the Rathavināṭa-Sutta set forth the mātikā of the Visuddhimagga?

(c) Comment on the exegetical method adopted in the Visuddhimagga, pointing out its qualities and defects.

(d) Precisely in what sense can the Milindapañha be considered a notable example of historical-romance? Substantiate your answer with citations from your texts.

(e) How do the questions of Milinda bear testimony to the conflict of ideas that were found to be inconsistent with the teachings of Buddha?

## SECOND HALF.

Examiner—MR. S. N. MITRA, M.A.

1. Translate into idiomatic English *any three* of the following extracts, clearing allusions where necessary :—

18

- (a) Sakam sakam ditthiparibbasānā  
viggayha nūnā kusalā vadanti |  
yo evam jānāti sa vedī dhammaṃ  
idaṃ paṭikko-sam akevalī so ||  
Evam pi viggayha vivādiyanti  
bālo paro akusalo ti cāhu |  
sacco nu vādo katamo imesaṃ  
sabb'eva h'ime kusalā vadānā ||
- (b) Pahānaṃ kāmaccchandānaṃ domanassāna c'ūbhayaṃ |  
thīnassa ca panūdanaṃ kukkucānaṃ nivāraṇaṃ ||  
Upakkhāsatisaṃsuddhaṃ dhammatakkapurejayaṃ |  
aññāvimokkhaṃ pabrūni avijjāya pabhedanaṃ ||  
Ajjhataṇ ca bahiddhā ca vedanaṃ nābhinandato |  
evaṃ satassa carato viññānaṃ uparujjhati ||
- (c) Rajataṃ jātarūpaṇi ca khettaṃ vatthuaṃ ajejakam |  
dāsīdāsaṇi ca dummedhā sādīyissanti 'nāgate ||  
Ujjhānasaññino bālā sīlesu asamāhitā |  
unnaḷū vicarissanti kalahābhiraṭā magā ||  
Uddhataṃ ca bhavissanti nīlacivaraparutā |  
kuhā thaddhā lapā siṅgī carissantiyariyā viya ||
- (d) Ubho mātā ca dhītā ca mayaṃ āsuṃ sapattiyo |  
tassā me ahu samvego abbhuto lomahaṃsano ||  
Dhi-r-atthu kāmā asuci duggandhā bahukaṇṭakā |  
yattha mātā ca dhītā ca sabhāriyā mayaṃ ahuṃ ||  
Kāmesvādinavaṃ disvā nekkhammaṃ dāhahkemato |  
sā pabbajjā Rājagahe agārasmā anagāriyaṃ ||
- (e) Māyaṃ viya aggato kataṃ supinante va suvaṇṇapādapaṃ |  
upadhāvāsi andha rittakaṃ janamajjhe-r-iva rupperūpakaṃ ||  
Vaṭṭani-r-iva koṭar' ohiṭi majjhebulakā sa-assukā |  
piḷikoḷikā c'ettha jāyati vividhā cakkhuvidhā 'va piṇḍitā ||

2. Show that the gāthās of the Theras and Theris are characterized by feelings natural to their sex. Illustrate your answer by apt quotations from the text.

16

Or,

'The dispensation of Gotama shook the social fabric to its very foundation : in that revolution the part played by women was unique.' Justify the statement by illustrations from the lives of the Theris you have studied.

Or,

'Although the composition may at times appear conventional, there are personal touches in some of the psalm: (of the Thera-theri-gāthā) which preclude us from regarding them as mere conventional hymns of praise.' Justify or refute.

3. Draw a map reproducing the geographical information found in the Vattugāthā of the Pārāyana-Vagga, and estimate its importance for the study of Ancient Indian history. 16

Or,

'The Aṭṭhaka and Pārāyana-Vaggas seem to have already existed as separate poems.'

Adduce evidence in support of this statement.

Or,

'The Pārāyana-Vagga is a fitting closure to the Sutta-Nipāta.' Explain and illustrate.

(GROUP A.)

## SEVENTH PAPER

### FIRST HALF

*Eaminer*—PROF. B. M. BARUA, M.A., D.LITT.

*The figures in the margin indicate full marks.*

Attempt THREE questions only, Question 1 being compulsory.

1. Translate the following into English, adding explanatory notes where necessary :— 18

(a) Sugaṇaṃ rajo raṇo Gājī-putasa Visadevasa putasa Goti-putasa Āgarajusa putasa Vāchhi-putasa Dhanabhūtiṇa kāritaṃ toraṇaṃ(ṇaṃ) silākaṇṇamaṇṇo cha upamaṇṇa(no).

(b) [Rāṇo Ko]sikiputrāsa Indāgimitrāsa pajāvātiye jivāputrāye Kurāṅgiye dānaṃ rāja-pāsādā-choṭikā-Si [rimāye dānaṃ].

2. Discuss the date of Khāravela from the data furnished by the Hāthīgumphā inscription. 16

3. Point out the linguistic peculiarities of the Sāncī inscriptions, noting the points of agreement or disagreement with Pāli. 16

4. (a) Transcribe in Brāhmī one of the extracts in Question 1 above. 16

(b) Ascertain on paleographic evidences the date of the older group of inscriptions of the stūpas at Sāncī.

5. Write short notes on any four of the following :— 16  
*Pādamūlika, Asaka, ekabamhāṇa, Māhasati. Kūkaṇḍava, Cheti-rāja-vasa, Mahāvijayaṇ pāsādash. Paṭhika-Bhojake, Sāḍḍika-saṃmadam turam devānam Daḍḍanikamo chakamo, Bahuhathikanigodha-naḍḍode.*

## SECOND HALF

Examiner.—DR. B. C. SEN, M.A., PH.D.

The questions are of equal value.

Attempt ANY THREE of the following questions.

1. Give a chronological account of the chief events of Asoka's reign connected with his administration and propaganda for dhamma.
2. Can you derive any material help from the Pāli literature for a proper appreciation of the Bhābrū-edict?
3. Explain : āsinava, parisā, nijhati, samāja.
4. (a) Did Asoka believe in a future life? If so, what bearing did that faith have on the dhamma as propounded by him?  
 (b) Discuss Asoka's attitude towards animal-life. How was it practically demonstrated?
5. Annotate any three of the following extracts :—  
 (a) ete-cha amne-cha bahukā mukhā dānavisagasi viyāpaṭṭa-se mama-cheva devinaṃ-cha (:) savasi-cha-me olodharasi te-bahuvidāena ākā)lena tāni tāni tuṭṭhāyatan(ā)ni paṭi(pādayaṃti).....  
 (b) Uje(ni)te pi chu kumāle etāyeva aṭṭhāye (ni)khāma(yisa) hedis(aṃ)-meva vagaṃ no cha atikāmayisati tiṇṇ(i) vasāni.....  
 (c) atana āgācha mahiyite hida Budhe jāte Sakyamunī ti silā-vigaḍḍabhi-chā kālāpita silā-thabhe cha usapāpīte hida Bhagavaṃ jāte ti Luṇṇini-gāme ubalike kaṭe.....  
 (d) Yaṇi mayā saṃghe upayīte bādhaṃ cha me pakaṃte iminā chu kālena amiṣā samānā munisā Jambudīpasi miṣā devehi....
6. Transcribe in Asokan Brāhmī extracts (a) and (c) in Question 5 above.

(GROUP A.)

## EIGHTH PAPER

The figures in the margin indicate full marks.

## FIRST HALF

Examiner.—MR. S. N. MITRA, M.A.

1. Write an essay on one of the following subjects : 30  
 (a) Chronology of Pali Canonical Texts.  
 (b) Early types of Pali poetry.  
 (c) The Jātakas—their literary and historical importance.  
 (d) Religious reflections of early Buddhist Brethren and Sisters.  
 (e) The importance of inscriptions in the study of Buddhism and its history.

## SECOND HALF

Examiner—MR. C. D. CHATTERJEE, M.A.

2. Render any one of the following extracts into English:— 50

(a) Tada Dhananando rājā sayam alaṅkatapaṭṭiyatto nānāvīdhaṇḍiṣa-samujjalitāya anekasahassikāya hatthi-assarathapattisaṁkhātāya caturāṅginīyā senāya sampannarājāsataparivāro alaṅkatadevaccharapaṭṭibhāgena nāṭakithigāyena ca sampannavirivibhavo suvaṇṇapīṇḍitakaḥcanamālikāṁ setacchattaṁ ca dhāriyamāno mahantena parivārena gantvā dānasālaṁ pavisitvā addasa nisinnāṁ Cāṇakabrahmaṇaṁ 'saṁgha-brāhmaṇaṁ.' 'Disvān'assa etad ahoṣi, "Nāyaṁ anucchaviko saṁgha-brāhmaṇāsane nisīdituṁ" 'ti, tasmīṁ pana anattamaṇo hutvā anattamanavācaṁ nicchārento, "Ko'si tvaṁ saṁghabrāhmaṇāsane nisinn'o'si" 'ti taṁ pucchitvā tena "ahaṁ" 'ti vutte, "Evaṁ dubbaṇṇarūpaṁ brāhmaṇaṁ ito niharatha, mā idha pavisitūṁ dethā" 'ti vutte, "Dānabyāvaṇa mā deva evaṁ karotu, khamatha brāhmaṇassā" 'ti punappunaṁ vuccamāno pi tath' eva āṇāpesi. So pana rājapuriseso attano santikaṁ gantvā, "Ācariya mayaṁ rājāyā tvaṁ ito niharapaṭṭhāya āgatambā; 'ito nikkhama ācariyā' 'ti vattunā pana asakkontā ṭhitambā" 'ti vuttetu, "Rājāno nāma durāsadā honti" 'ti; tasmīṁ duṭṭho utṭhāyāsanaṁ nikkhanto yaṁñasuttaṁ ca chinditvā kuṇḍikāya ca indakhilāṁ paṭṭihaṇṇitvā, "Imāya ca cūṭurātāya paṭṭhaviyā Nandino vadḍhi nāma mā hotū" 'ti abhisapitvā va nikkhami.

Rājapurisā tasmīṁ nikkhante tamatthaṁ rañño ārocesuṁ. Rājā punapi ativā kujjhitvā, "Dāsaṁ gaṇhatha, dāsaṁ gaṇhathā" 'ti anattamanavācaṁ nicchāretvā āṇāpesi. So pana nikkhanto'va naggo hutvā ājīvakavesaṁ gaḥetvā palāyanto antorājavatthumhi yeva gatapaccāgatikākīraṇaṭṭiṇo ilīyi.

- (b) Dānaṁ nāma sukhādānaṁ nidānaṁ paramaṁ mataṁ, dibbānaṁ pana soppānaṁ paṭiṭṭhā'ti pavuccati. Dānaṁ tānaṁ manussassa dānaṁ bandhuparāyanaṁ, dānaṁ dukkhādhipannānaṁ sattānaṁ paramā gati. Dukkhanittharaṇaṭṭhena dānaṁ nāvū'ti dīpitaṁ, hayā rakkhanato dānaṁ nagaraṇ'ti ca vaṇṇitaṁ. Dānaṁ durāsadaṭṭhena vuttamā'viso'ti ca, dānaṁ lobhamalādihi padumaṁ anupalittato. Natthi dānasamo loke purisassa avassayo, paṭipajjatha tasmā taṁ kiriyājjhāsayena ca. Saggalokanidānaṁ dānaṁ matimā idha, ko hi nāma naro loko na dadeyya hite rato. Sutvā deveṣu sampattiṁ ko naro dānasambhavaṁ, na dajjā sukhāśānaṁ dānaṁ cittappamodaṇaṁ. Dānena paṭipannena accharā parivārito, ramate suciraṁ kālaṁ Nandane suranandane. Pittimudāraṁ vindati dātā gāravamasmīṁ gacchati loke, khyātimanantaṁ yāti ca dātā vissaniyo hoti ca dātā. Datvā dānaṁ yāti naro so bhogasamiddhiṁ dighañcāyuni, sūssarataṁ pi ca vindati rūpaṁ sagge saddhiṁ kila tidivehi, vimānesu ṭhatvā nānā mattamayūrūbhīrutesu. Corāpi rājodakapāvakaṇaṁ dhanaṁ asādhāraṇameva dānaṁ, dadāti taṁ sāvakaññābhūmiṁ, paccakabbhūmiṁ pana Buddha-bhūmiṁ'ti.

## (GROUP B.)

## FIFTH PAPER

Examiner—PROF. B. M. BARUA, M.A., D.LITT.

*The figures in the margin indicate full marks.**Only six questions are to be attempted, including Questions 1 and 2 which are compulsory.*

1. Translate any two of the subjoined extracts, adding short explanatory notes :— 20

(a) Tasmiñ kho pana samaye dhammā honti khandhā honti āyatanāni honti dhātuyo honti āhīrā honti indriyāni honti jhānaṃ honti maggo hoti balāni honti hetū honti phasso hoti vedanā hoti saññā hoti cetanā hoti cittaṃ hoti vedanākkhandho hoti saññākkhandho hoti saṅkhārakkhandho hoti viññāṇ-<sup>20</sup>kkhandho hoti manāyatanaṃ hoti manindriyaṃ hoti manoviññāṇadhātu hoti dhammāyatanaṃ hoti dhammadhātu hoti ye vā pana tasmiñ samaye aññe pi atthi paticca samuppānnā arūpino dhammā—ime dhammā kusalā.

(b) Yaṃ bāhiraṃ tejo tejogataṃ usmā usmāgataṃ usumaṃ usumagataṃ bahiddhā anupādīppaṃ seyyathidaṃ kaṭṭhaggaṃ sakalikaggaṃ tiṇaggaṃ goma-yaggaṃ thusaggaṃ saṅkārāggaṃ indaggaṃ aggaṃ santāpo suriyasantaṃ kaṭṭhasannicaya-santaṃ, tiṇasannicaya-santaṃ yaṃ vā paṇ'āññaṃ pi atthi bāhiraṃ tejo tejogataṃ usmā usmāgataṃ usumaṃ usumagataṃ bahiddhā anupādīppaṃ —ayaṃ vuccati bāhiraṃ tejodhātu.

(c) Cittatāya cittaṃ. Kathaṃ? cittakaraṇatāyā ti. Lokasmiṃ hi cittakammato uttariṃ aññaṃ cittaṃ nāma n'atthi. Kasmim pi caraṇaṃ nāma cittaṃ aticittaṃ eva hoti? Taṃ karontānaṃ cittakārānaṃ 'evaṃ-vidhāni ettha rūpāni kātabbāni' ti citta-saññā upapajjati. Chittatāya saññāya lekhāya gahaṇa-rañjana-ujjotana-vattanādi-nipphādikā cittakiriyaṃ upapajjanti. Tato caraṇa-saṅkhātā citta-saññātaraṃ vicittarūpaṃ nippajjati. Tato 'imassa rūpassa upari idaṃ hotu, heṭṭhā idaṃ hotu, ubhayapasse idaṃ' ti cintetvā yathācintitena kameṇa sesacitta-rūpanipphādanāni hoti.

(d) Ārammaṇaṃ cintetvā ti cittaṃ cittaṃ vacanatto vutto eva. Lakkhaṇādito pana vijānanalakkhaṇaṃ cittaṃ pubbaṅgamarasaṃ sandhāna-paccupaṭṭhānaṃ nāmarūpa-padaṭṭhānaṃ. Catubbūmaka-cittaṃ hi no vijānanalakkhaṇaṃ nāma n'atthi sabbaṃ vijānanalakkhaṇaṃ eva. Dvāraṃ pana patvā ārammaṇavibhāvanatthāne cittaṃ pubbaṅgamaṃ purecārikaṃ hoti. Cakkhunā hi diṭṭhaṃ rūpārammaṇaṃ cittaṃ eva vijānāti, manasa chammārammaṇaṃ cittaṃ eva vijānāti. Yathā hi nagaraguttiko nagara-majjhe siṅghātako nisīditvā 'ayaṃ nevā-iko ayaṃ āgantuko' ti āgatāgataṃ janaṃ upadhāreti vavatthapeti, evaṃsampadam idaṃ vedittabbaṃ ti.

2. Distinguish between the pairs of terms in any four of the following :— 20

- (a) *dhamma* and *abhidhamma* ;
- (b) *Sūlanta-bhājanīya* and *Abhidhamma-bhājanīya* ;
- (c) *citta* and *cetasika* ;
- (d) *jhāna* and *samādhi* ;
- (e) *rūpārammaṇa* and *dhammārammaṇa* ;
- (f) *viāka* and *vicāra*.

3. Ascertain the date of composition of the *Dhammasaṅgaṇi*, and determine its chronological position among the *Abhidhamma* books. 154. Discuss the importance of the *Atthasālinī* as an exposition of *dhammas*. 15



5. Set forth the scheme adopted in the *Dhammasaṅgaṇi*, and discuss the correctness of the argument that the *Dhammasaṅgaṇi* is nothing but a Buddhist manual of psychological ethics. 15

6. What is meant by the Buddhist 'Door theory of Cognition'? How far can the process of sense-perception be consistently explained by this theory? 15

7. Prof. Stecherbatsky observes: 'That the conception of *dharmā* is the basic conception of Buddhism is most clearly and pregnantly expressed by the Buddhists themselves in their old *credo* (faith)—*Ye dharmā hutuprabhavā* etc. This formula which professedly contains the shortest statement of the spirit and essence of Buddhism declares that Buddha discovered the elements (*dharmā*) of existence, their causal connexion (*hetu* = *pratitya-samutpāda*) and the method to suppress their efficiency for ever (*nirodha*)... *Dharmā*, *pratityasamutpāda* and *anātma* are only different expressions of one and the same idea of philosophic pluralism.'

Criticize the above view in the light of Buddhaghosa's explanation of *paccaya-sāmaggi* or *samavāya*.

8. Write short explanatory and critical notes on three of the following:— 15

(a) *Ekakāraṇavādo paṭisedhito hoti*.

(b) *Kammaṃ satte vibhajati*.

(c) *Cintanaṭṭhena cittaṃ, vicittaṭṭhena vā cittaṃ*.

(d) *Sakalaṃ Vinayapitakaṃ Abhidhammapitakaṃ Khuddakapāṭha-dhammapadūdayo...*, *ṭhapetvā cattāro nikāye avasesa-Buddhavacanāṃ Khuddaka-nikāyo*.

9. Define any three of the following terms: *vedanū cetanū*, *āyatana*, *sakkāyaditṭhi*, *saṃ*, *rūpa*, and *viññāṇa*. 15

10. What are the four *avacaras*? Show their bearing on the analysis of mind and classification of mental and moral states. 15

(GROUP B)

## SIXTH PAPER

Examiner—DR. N. DATTA, M.A., PH.D., D.LITT.

*The questions are of equal value.*

*Attempt six questions only.*

1. Translate any two of the following extracts into English:—

(a) *Icevaṃ gahita-paṭisandhikēnaṃ pana paṭisandhinirodhānantarato pabhūti tam ev'ālambanam ārabha tad eva cittaṃ yāva cuti-cittuppādā asati vithi-cittuppāde bhavassa aṃgabhāvena bhavaṃga-santati-saṃkhātāṃ māna-saṃ abbocohinnaṃ nadi-soto viya pavattati. Pariyosāno ca cavanavasena cuti-cittaṃ hutvā nirujjhati. Tato paraṇ ca paṭisandhādayo ratha-cakkaṃ iva yathākammam eva parivattantā pavattanti.*

(b) *Yaṃ 'ruppati' ti rūpaṃ ti, tathā 'rūpayati' ti vā rūpārūpa-bhavātīto, surūpo rūpaṃ abhavi; taṃ rūpaṃ duvidhaṃ hoti, bhūto 'pādāya-bhedato; catubbidhā mahābhūtā; upādā catuvīsati.*

Paṭhavi-dhātu āpo ca, tejo vāyo tath'eva ca  
cattāro 'me mahābhūtā, mahābhūtena desitā.  
Mahantā pātubhūtā ti, mahābhūtā samā ti vā  
vañcakattā abhūtena, mahābhūtā ti saññitā.

(c) Duvidham dukkham : kāyikaṇ ca cetasikaṇ ca. Yaṃ kāyikaṃ idaṃ dukkham, yaṃ cetasikaṃ idaṃ domanassaṃ. Sabbe sattā hi dukkhassa ubbijjanti. N'atthi bhayaṃ dukkhena samaśamaṃ, kuto vā pana uttari-taraṃ ? Tisso dukkhatā : dukkha-dukkhatā, vipariṇāma-dukkhatā, saṃkhāra-dukkhatā. Tattha loko odhiso kadāci karahaci dukkha-dukkhatāya muccati. Tathā vipariṇāmadukkhataya. Taṃ kissa hetu ? Honti loke appābhā pi dīghāyukā pi. Saṃkhāradukkhataya pana loko anupādisesāva nibbāna-dhātuyā muccati.

2. 'Ettāvatā samattā Nettiyā āyasmatā Mahākaccānena bhāsītā. Bhagavatā anumoditā mūlasaṃgītiyaṃ saṃgītā ti.'

→ Criticize this statement with a view to ascertain the authorship and the time of composition of the Nettippakaraṇa.

3. Write all that you know about the life of the authors of the Abhidhammatthasaṅgaha and the Abhidhammāvatāra.

4. Name the various sections of the Nettippakaraṇa, and point out their interrelation, if any.

5. Explain any two of the following groups of terms :—

(a) Hetupaccayo, ārammaṇapaccayo, adhipatipaccayo, anantarapaccayo, samanantarapaccayo, and saha-jātapaccayo.

(b) Desanāhāro, vicayahāro, padaṭṭhanahāro, vibhattihāro, sodhanahāro, and lakkaṇahāro.

(c) Nandiyāvatto, tipukkhalo, sīhavikkīḷito, disālocano, and añkuso.

6. Apply *otaraṇahāro* to elucidate the following stanza :—

Uddham adho sabbadhi vippamutto  
ayam ahasmī ti anānupassī  
evaṃ vimutto udatāri oghaṃ  
atiṇṇapubbaṃ apunabbhavāyā ti.

7. 'Cittam cetasikaṃ rūpaṃ, nibbānaṃ ti niruttaro  
catudhā desayī dhamme, catusaccappakāsano.'

Summarize Buddhādatta's comments on this stanza, and show that it refers to the principal topics of the Abhidhammapiṭaka.

8. Compare the contents of the Abhidhammatthasaṅgaha and the Abhidhammāvatāra and show that both these works deal almost with the same topics.

9. Explain according to the Abhidhammatthasaṅgaha *vithicitta* and *bhavaṅga-citta*.

10. What is a *kammaṭṭhāna* ? Detail the process of *parikamma-bhāvanā*, *upacāra-bhāvanā*, and *appanā-bhāvanā*.

11. 'Yathā pana loke kārakābhāve pi paṭhavi-āpo-teja-utu-ādayo paṭicca añkurādīnaṃ abhinibbatti dissati, tathā cetasam pi kusalādīnaṃ dhammānaṃ hetupaccaya-sāmaggiyā abhinibbatti hotīti veditaḥḥ.' Amplify this statement to establish that there is no Soul in the highest sense.

12. Explain fully :—

(a) Tattha Bhagavā ugghaṭṭitaññussa puggalassa nissaraṇaṃ desayati, vipaṇcītaññussa pugga'ssa ādinavaṇ ca nissaraṇaṃ ca desayati, neyyassa puggalassa assādaṇ ca ādinavaṇ ca nissaraṇaṇ ca desayati.

(b) Yo ca paṭiccuppādo indriyakkhandhā ca dhātu-āyatanā etehi otarati yo otaraṇo nāma so hāro.

13. Compare the philosophical application of the term *parikkhāro* in the Netti (Hāra-vibhaṅga § 15), with the use of the term in the Vinaya, and comment on the opinion, that the view it embodies about causation argues, for the Netti, a date prior to that of the 7th book of the Abhidhamma-piṭaka (Paṭṭhāna).

14. Discuss the emergence of the term *celāsika*, and criticize the opening verse of the Abhidhammatthasaṅgaha, that, of the 'catudhā' subject, this term and *nibbāna* are *vuttābhidhammatthā*. Comment incidentally on the term *sadhāraṇa* in this work and Abhidhammāvatāra.

15. In the Kāraṇakapaṭivedha, how does Buddhadatta mis-quote in referring to the chariot-simile? In this connection, what is your opinion of his conclusion concerning the *-bhāvo*, or *-abhāvo* of a *kāraṇo* in nature and in man?

16. *Bhāveṣṣati ayaṃ maggaṇi* (ver. 1157) - discuss the form in which Buddhadatta introduces this ancient phrase, and to what extent you think it does, or does not, express the core of a datum of normative philosophy in original Buddhism.

17. Compare the application of the term *padatṭhāna* in the Netti—*Evaṇṇo koci upanissato, yo koci paccayo, sabbo so padatṭhānaṇi*—with its use in definition in the works of Buddhadatta and Buddhaghosa.

### (GROUP B)

### SEVENTH PAPER

Examiners— { PROF. B. M. BARRA, M.A., D.LITT.  
REV. A. DHAMMAVAMSA MAHATHERA.

*The questions are of equal value.*

*Only SIX questions are to be attempted, including Question 10 which is compulsory.*

1. Who is the author of the Kathāvatthu?

Is there any reliable evidence to prove that it is a compilation of the Asokan age or that it faithfully reflects the conflict of ideas that characterizes the period following the Parinirvāṇa?

2. Determine the place of the Kathāvatthu in the Abhidhamma Piṭaka. How far is it canonical?

3. 'An arahant may fall away.' Who are the exponents of this opinion? Explain their view-point, and show wherein it differs from the *Thervādin* interpretation.

4. Develop the argument in *one* of the following controverted points:—

(a) *Kalyāṇapāpakāni kammāni upalabbhantīti?* Amantā.  
*Kalyāṇapāpakānaṃ kammānaṃ kattā karetaṃ upalabbhantīti?*  
*Na hēvaṃ vattaṃbe.*

(b) *Rūpaṃ upādāya puggalaṃ paññattīti?* Amantā.  
*Rūpaṃ aniccaṃ saṅkhatāṃ paṭiccasamuppannaṃ khayadhammaṃ*  
*vayadhammaṃ virāgadhammaṃ nirodhadhammaṃ vipariṇāma-*  
*dhammanti?* Amantā.

5. Explain fully in Pāli:—

*Sappaṭighaṃ dhammaṃ paticca sappaṭigho dhammo uppajjati hetu paccayo.*

6. Distinguish between—

(a) *hetu* and remaining *paccayas*;

- (b) *ananlara and samanantara* ;  
 (c) *purejāta and pacchājāta*.

7. Define Paṭṭhāna and Paccaya. What are their various divisions ?  
 8. Write all that you know about the aim and importance of Dukapaṭṭhāna.

9. Comment on the following :—

- (a) Tassa sammāvīmuttassa santacittassa bhikkhuno,  
 Katassa paticayo natthi karaṇiyaṃ na vijjati,  
 Solo yathā ekagharo vātena na samīrati,  
 Evaṃ rūpā rasā saddā gandhā phassā ca kevalā,  
 Itthā Dhammā añiṭṭhā ca nappavedhenti tādino,  
 Tṭhitaṃ cattam vippamuttaṃ vayaṇa assānupassatīti.  
 (b) Suññato lokaṃ anekkhassu Mogharājā sadā sato  
 Attānuddiṭṭhimūhacca evaṃ maccutaro siyā.  
 Evaṃ lokaṃ avekkhantaṃ Maccurājā na passati.

10. Translate into English one of the following extracts adding notes where necessary :—

(a) Dānaṃ datvā sīlaṃ uposathakamaṃ taṃ paccavekkhati, pubbe sucippāni paccavekkhati, jhānā vuṭṭhahitvā jhānaṃ paccavekkhati. Ariyā maggā vuṭṭhahitvā maggaṃ paccavekkhanti, phalaṃ paccavekkanti, pahinakilese paccavekkhanti, vikkhambhakilese paccavekkhanti, pubbe samudāciṇṇe kilese jānanti. Sahetuke ceva na ca hetū khandhe aniccato..... pa.....domanassaṃ uppajjati ; cetopariyañānena sahelūkaūceva na ca hetu cittaasamāgissa cittaṃ jānāti ; ākāśānāñcāyatanaṃ viññāṇañcāyatanaṃ, ākiñcāññāyatanaṃ nevassaññānāsāññāyatānassa ārammaṇapaccayena paccayo. Sahetukā ceva na ca hetū khandhā iddhiividhanāṇassa cetopariyañāṇassa pubbenivāsānussatiñāṇassa yathākammupagañāṇassa anāgataṃsaññāṇassa ārammaṇapaccayena paccayo.

(b) Sahajātaṃ, pacchājātaṃ, ābhāraṃ, indriyaṃ. Sahajātā āsava-sampayuttā khandhā ca mahūbhūta ca citta-samuṭṭhānānaṃ domanassa-vicikicchā-uddhaccasahagatā khandhā ca moho ca citta-samuṭṭhānānaṃ rūpānaṃ atthipaccayena paccayo. Domanassa vicikicchā-uddhaccasahagatā khandhā ca vatthu ca mohassa atthipaccayena paccayo. Pacchājātā āsava-sampayuttā khandhā ca kabalīṇkāro āhāro ca imaṃsa kāyassa atthipaccayena paccayo. Pacchājātā āsava-sampayuttā khandhā ca rūpajivitindriyaṇa kaṭattā rūpānaṃ atthipaccayena paccayo.

#### (GROUP B)

#### EIGHTH PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF.

*Examiner—MR. GOKUL DAS DE, M.A.*

1. Write an essay on one of the following subjects :— 50  
 (a) The attitude in early Buddhism towards causation or causality.  
 (b) The Buddhist conception of Time and Space.  
 (c) The psychological data of Ethics.

#### SECOND HALF.

*Examiner—MR. R. P. CHAUDHURI, M.A.*

2. Translate any two of the following passages of which only one is to be selected from among the prose texts :— 50

(a) Iddhimā parassa cittaṃ jānitukāmo āvajjati. Āvajjanaṃ khaṇapaccuppannaṃ ārammaṇaṃ katvā ten'eva saha nirujjhati. Tato cattāri pañca javanāni. Yesaṃ pacchimiṇi iddhicittaṃ sesāni kāmāvacarāni tesāṃ sabbesampi tad eva niruddhaṃ cittaṃ ārammaṇaṃ hoti na ca tāni nānārammaṇāni honti. Addhāpaccuppanna-vasena paccuppannārammaṇattā ekārammaṇāni ekārammaṇatte pi ca iddhicittaṃ eva parassa cittaṃ jānāti na itarāni. Yathā cakkhuvāre cakkhuvīṭṭhānaṃ eva rūpaṃ passati na itarāni ti idaṃ santati paccuppannassa c'eva addhā paccuppannassa ca vasena paccuppannārammaṇaṃ hoti. Yasmā vā santati paccuppannaṃ pi addhā paccuppaane yeva patati tasmā addhā paccuppannavasen'etaṃ paccuppannārammaṇanti veditabbaṃ.

(b) Jīvitindriyupacchedasālikhātassa maraṇassa saraṇaṃ maraṇasati. Taṃ bhāvetukāmena rahogatenā paṭisallīnena, maraṇaṃ bhavissati, jīvitindriyaṃ upacchijjissati ti vā maraṇaṃ maraṇaṃ ! ti vā yoniso manasikāro pavattetabbo. Ayoniso pavattayato hi itthajānamaraṇānussaraṇe pāmojjaṃ uppajjati, verinaṃ verimaraṇānussaraṇe viya, majjhatajaṇamaṇānussaraṇe saṃvego na uppajjati, matakalebaradassane chavādāhakassa viya, attano maraṇānussaraṇe santāso uppajjati, ukkhittāsikaṃ vadhakaṃ disvā bhīrukajātikassa viya. Tad etaṃ sabbampi satisa-ṭṭhogaṇānavirahato hoti. Tasmā tattha tattha hatamatasatte oloketvā diṭṭhapubbasampattiṇaṃ sattānaṃ matānaṃ maraṇaṃ āvajjetvā satīṃ ca saṃvegaṇa jānaṇa ca yojetvā maraṇaṃ bhavissati ti ādinā nāyena manasikāro pavattitabbo. Evaṃ pavattento hi yoniso pavatteti ; upāyena pavatteti ti attho.

- (c) Attano vi-ayo dukkhaṃ katan te yadi verinā,  
Kiṃ tassa visayo dukkhaṃ sacitte kattuṃ icchasi ?  
Bahūpakāraṃ hitvāna jīvitivaggaṃ rudaṃ mukhaṃ  
Mabānatthakaraṃ kodhaṃ sapattaṃ na jahā-i kiṃ ?  
Yāni rakkhasi sīlāni tesāṃ mūlanikantaṇaṃ  
Kodhaṃ nāma upalālesi—ko tayā sadiso jaḷo ?  
Kataṃ anariyaṃ kammaṃ pareṇa iti kujjhasi,  
Kiṃ nu tvaṃ tādisaṃ yeva so sayam kattuṃ icchasi ?  
Doseṭukāmo yadi taṃ amanāpaṃ pi ro kari  
Doseṭupādena tass'eva kiṃ pūresi manorathaṃ ?  
Dukkhaṃ tassa ca nāma tvaṃ, kuddho kāhasi vā  
na vā,  
Attānaṃ paṇ'idān'eva kodhadukkheṇa bādhasi ?  
Kodhaṃ vā ahitaṃ maggaṃ āruḥhā yadi verino,  
Kasmā tuvampi kujjhanto tesāṃ yevānussikkhasi ?  
Yaṃ dosaṃ tava nissāya sattunā appiyaṃ kataṃ,  
Tameva dosaṃ chindassu kiṃ atthāne vihaṇṇasi ?

- (d) Rūpā saddā rasā gandhā phassā dhammā ca kevalā  
Itthā kantā manāpā ca, yāvat'atthi ti vuccati.  
Sadevakassa lokassa ete vo sukhasammatā ;  
Yattha c'ete nirujjhanti, taṃ nesaṃ dukkhasamma-  
taṃ ;  
Sukhanti diṭṭhaṃ ariyehi sakkāyassa uparodha-  
naṃ ;  
Paccānikam idaṃ hoti sabbalokena passataṃ.  
Yaṃ pare sukhato āhu, tad ariyā āhu dukkhato,  
Yaṃ pare dukkhato āhu tad ariyā 'sukhato vidū.  
—Passa dhammaṃ durājānaṃ ; sampamūḷh'ettha  
aviddasū.  
Nivūtānaṃ tamo hoti, andhakāro apassataṃ ;  
Sataṇca vivaṇaṃ hoti, āloko passataṃ iva ;  
Santike na vijānanti magā Dhammassa akovidā,  
Bhavarāga paretehi bhavasotānusaṇṇi  
Māradheyyānupannehi nāyaṃ Dhammo susāmbudho.

## ARABIC

### FIRST PAPER

Examiners— {    PROF. M. Z. SIDDIQI, M.A., Ph.D.  
                              MR. A. H. HARLEY, M.A.

*The figures in the margin indicate full marks.*

*Not more than six questions are to be answered and not more than THREE from either group. Question 5 in Group A is compulsory.*

#### GROUP A

1. From the inscriptions, four great South Arabian periods in the pre-Islamic age can be distinguished; give an account of the nature and importance of the civilization of *any two* of those periods, and a general description of exploration in al-Yaman. 16

2. Give an account of the pre-Islamic civilization of al-Hirah, and indicate its influence on the culture and literature of the Arabian peninsula. 16

3. (a) 'The blood of the martyrs is the seed of the church.' To what extent would the early history of Islam support the truth of such a saying?

(b) What causes or circumstances favoured the success of the Prophet? 16

4. Give an account of 'Abdullāh b. az-Zubair, and discuss the causes of the failure of his movement. 16

5. Draw an outline map of Arabia, and mark in it the position of *three* of the following places, and write notes explaining the importance of these three in the early history of Islam: Ṣan'ā; Badr; Najrān; Khaibar; Yamāmah; Ṭā'if. 20

#### GROUP B

6. Describe the factors that made possible the success of the Arabs in their foreign conquests under the Umayyads, and include mention of their equipment of armour, their formation on the field, and their commissariat. 16

7. Give an account of the history and nature of Persian influence at the 'Abbāsid court. 16

8. Write an account of the Seljūqs. How did there come about dissolution of the Empire despite their unifying influence? 16

9. Discuss the claims of 'Abdur Raḥmān III and al-Ḥakam II to be considered the greatest of the Muslim rulers of Spain as promoters of constructive measures and patrons of literature. 16

10. Write an account of the al-Mohads in N. W. Africa and of the literary activity under their sway. In what way can it be said that *Ḥayy b. Yaqẓān* reflects the spirit of the al-Mohads? 16

## SECOND PAPER

Examiners— { DR. AZIMUDDIN AHMAD, PH.D.  
PROF. M. Z. SIDDIQI, M.A., PH.D.

*The questions are of equal value.*

## FIRST PART

*Full Marks—80.*

*Attempt ANY TWO questions from first part.*

1. Prove and illustrate that Arabic, Hebrew, and Syriac belong to a common language known as 'Semitic'.
2. 'Of all Semitic languages Arabic is more akin to the Ur-Semitic.'  
Do you agree with the above remark? If so, why so; if not, why not?
3. What are the essential characteristics of the Semitic language?
4. Write notes on (a) Ethiopic, and (b) Aramaic.

## SECOND PART

*Full Marks—70.*

*Answer Question 1 and ANY THREE of the remaining questions.*

1. 'Poetry is a criticism of life.' Discuss the above remark fully, with reference to the pre-Islamic poetry of the Arabs.

*Or,*

Give a short account of the life of Zuhayr : justify or refute the remark :

”لم ينصل الشعر فى راد احد من الفحول فى الجاهلية ما اتصل فى راد زهير“

and discuss fully how far the poems of Zuhayr stand the test of good poetry laid down by himself :

” رَإِنَ اشْعَرَبَيْسَتِ اَنْتَ قَائِلُهُ  
بَيْتٌ يُقَالُ إِذَا اَنْشَدْنَاهُ صَدَقَ “

2. Describe briefly the collection and preservation of the Quran, and discuss its style and its influence on Arabic literature.

3. Give short accounts of three of the most important poets of the Umayyad period, and discuss their comparative merits.

4. 'Every change of many-coloured life is depicted in the pages of the Abbaside poets, where the reader may find the maddest gaiety, strains of lofty meditation mingled with a world-weary pessimism, delicate sentiment, unforced pathos, and glowing rhetoric.'

Discuss the justice of the above remark with reference to the poems of Abú Nuwás and of Abu'l-'Atáhiya.

5. Describe briefly the origin and development of historical literature in Arabic language till the beginning of the 15th century A.D.

6. Give brief accounts of Ibnu'l-'Arabī, of Ibnu-Ḥazm, and of Ibnu'l-Tufayl, and discuss their contribution to Arabic literature.

### THIRD PAPER

Examiners-- { MOULVI ABDUL HADI.  
DR. M. W. MIRZA, M.A., PH.D.

*The figures in the margin indicate full marks.*

#### FIRST PART

*Only TWO questions from Group A and TWO questions from Group B are to be attempted.*

#### GROUP A

1. 15 فى كم موضعاً يجب تقديم الخبر على المبتدا او تقديم المبتدا على الخبر؟ بنوه مع الامثلة \*
2. 15 ما هو المنادى؟ ثم هى حروف النداء وكم نوعاً المنادى - اكتبوا بالتفصيل \*
3. 15 كم نوعاً الاسم - كيف يبنى المثنى و كيف يبنى المقصور - بينوه بالامثلة \*

#### GROUP B

1. 15 ما هو المجاز وكم اقساماً له؟ اوضحوها بالا مثلة \*
2. 15 بينوا اقسام الاستعارة و اوضحوها بالا مثلة \*
3. 15 عليكم بتقطيع بيتين من الابيات الاتية :-  
(a) يا من يرى ما فى الضمير و يسمع  
انت المعد لكل ما يتوقع  
(b) يا من تحل بذكره  
عقد النوائب و الشدائد  
(c) من سلك القصد اذا ما سارا  
فى كل وجه امن العشارا



## SECOND PART

1. Translate into English any one of the following :—

20

- (b) وكن ابربرضى الله عنه جليل الصفات قدوة فى المكارم كثير الزهد وكن يعيش بالكفاف - وحسبك ما ورد من ان امرأته اقتصدت من قوت عائلتها ما كن منه فى عدة أيام قدر يسير من الدقيق - و ارادت ان تشتري به شيئاً من الحلوى - فلما علم به ابربر امر فاعيد الى بيت المال. لانه فضل عن قوت عائلة واسقط من نفقته بمقدار ما نقصت كل يوم - و كانت هذه النفقة تصرف اليه من بيت مال المسلمين لانه ترك تجارته لتفرغه - للاشتغال بامرهم - وكن مرتبه ٢٥ ديناراً فى السنة وشاة غير كاملة كل يوم - فلما وجد المسلمون ان ذلك لا يكفى عائلتها اكملوه الى ٣٠٠ دينار فى السنة مع شاة باكملها كل يوم اما سيرته مع المسلمين ورفقه بهم وحسن سياسته فيهم وتعهد لمصالحهم فما لا يفضل فيه راع مع رعيته وكن رضى الله عنه كثير النصح لعماله بالانابة فى اعمالهم والا بتعاد بالناس عن مراقب الفنين والتعفف عما فى ايديهم - و افضل ما يذكر فى تاريخه اهتمامه بجمع القرآن من صدور الحفاظ ومن بعض الصحف قبل ان يدخل عليه تغيير او تبدل \*
- (a) و لما كن بتاريخ العرة من شهر الله المحرم مفتتح عام اربعة و ثلاثين وسبعمة وصلنا الى وادى السند المعروف بينج آب ومعنى ذلك المياه الخمسة - وهذا الوادى من اعظم اودية الدنيا وهو يفيض فى اوان الحر فيزرع اهل تلك البلاد على فيضه كما يفعل اهل الديار المصرية فى فيض النيل - وهذا الوادى هو اول عمالة السلطان المعظم محمد شاه ملك الهند.

و السند - ولما وصلنا الى هذا النهر جاء اليها اصحاب الاخبار الموكلون بذلك وكتبوا بخبرنا الى قطب الملك امير مدينه ملتان و كان امير امراء السند على هذا العهد مملوك السلطان يسمى سرتيز و هو عرض المماليك و بين يديه عساكر السلطان - و كان فى حين قدومنا بمدينة سيوهستان من السند - و بيننا و بين ملتان مسيرة عشرة ايام و بين بلاد السند و حضرة السلطان مدينة دهلى مسيرة خمسين يوماً - و اذا كتب المخبرون الى السلطان من بلاد السند يصل الكتاب اليه فى خمسة ايام بسبب البريد \*

(c) و هو شاعر بليغ و ولد بسيرة البطحاء و نشأ بين اظهر العرب العرباء و اختص بالتربية و الترشيح فى منابت القيصوم و الشيم و نضارب شبابه با كفاف البادية شارباً من يذابيعها الا من يرايها ضارباً فى قبائلها و احيائها ملتقطاً فقر امواتها و احيائها و تطبّع بطباع الوبر و سلم لسانه من سقطات ساكنة المدر و له شعر متقن اللفظ و المعنى محكم الا سلس و المبنى - يقطر منه ماء البراعة و يعجز عن مثله ارباب الصناعة و الآن عطف اعناق ركائبه و صرف ازمة نجائه الى ذلك الجنب المعشب و الفناء المخصب و رؤس امانيه راقصة و عيون اماله شاخصة و المنتظر من كرم سيدنا ان ينزله فى رياض قبله و تمكينه و يغمره بطائف احسانه و تحسينه و ينعم عليه بتنعيم و يظهر اثر هذه الوسيلة على صفحات احواله \*

2. Translate into Arabic either (a) or (b):—

20

(a) But if our traveller revelled in the sight of human bustle and activity, he would have found enough in the city to rejoice his heart. Francois Martin calls Surat a veritable Babylon. People of all nations thronged its streets, their variegated costumes making a riot of colour in

the Indian sun. A constant stream of vehicles and beasts of burden passed by—camels, chariots, palanquins, and carriages—the 'whole', as Martin observes, 'conveying a sense of grandeur and prosperity difficult to find in any other city. And no wonder. Surat in the seventeenth century was the great emporium of the Mughal Empire. Her shops were stocked with merchandise from every part of the world. The commerce of Surat radiated outward to every part of the Asiatic sea-board. Her merchants carried indigo, pepper, cotton, and saltpetre to Basra and Baghdad on the Persian Gulf, to Moka and Jeddah on the Red Sea and came home richly laden with gold.

(b) An Assyrian inscription tells us that at the time of the great Deluge an ark came to rest upon the 'Mountain of Nazir', identified as a place near Rowanduz; while in turn first the Babylonians, then the Nestorians and next the Moslems held that Noah's ark rested not on Mount Ararat, but on Judi Daggh, that is Mount Judi in the highlands of Kurdistan. In support of this claim a solitary olive tree and some enormous wooden nails, reputed to have been used by Noah in building the Ark, are produced as unassailable evidence by the local people, and at Djazirah, the mosque is supposedly constructed out of timbers of the actual vessel. On the summit of Judi was a Nestorian monastery destroyed by lightning in the year 766, and upon its ruins was built a Moslem shrine which, too, is now no more. But Christian, Jew, and Mohammadan still on a certain day in summer make pilgrimages to the holy mountain.

#### FOURTH PAPER

Examiners— { Mr. A. F. M. ABDUL KADIR, M.A.  
 { MAULVI A. AZIZ, AL-MAIMIN.

*The figures in the margin indicate full marks.*

#### FIRST HALF

1. Attempt either (a) or (b):—

15

(a) Describe the Prophet of Islam as represented by Abu Sufyan to Hiraql in his court.

(b) Translate into English:—

و من عادتنا ايها الملك ان نرضع اولادنا من المراضع و يندر ان يعيش  
 لنا ولد على لبن امه و نختار المراضع من اهل البادية لصحة اجسامهم فاختارت  
 له امه مريضا من اهل الطائف اسمها حليلة فارضعته حولين قضا هما في سهول  
 الطائف و اوردته فنشأ نشيطا و سمعت الناس يتحدثون عن طفولته اخبارا  
 غريبة اسم نسمع بمثلا من نرى قبل منها ان مريضة تركته يلعب مع ولدها  
 ذات يوم خلف البهوت فاذا بولدها جاء يقول ان اخى القرشى اخذه رجلان

عليهما ثياب بيض نشقاً بطنه فخرجت هي تالتمسه فوجدته منفرداً فسألته عن  
أمره فقال جاءني رجلان عليهما ثياب بيض فأضجعاني و شقاً بطني فالتمسا فيه  
شيئاً لا أدري ما هو و غسلاه بالثلج فخافت حليلة على الغلام فحملته الى أمه  
بمكة فقضى فيها مدة يرمى الغنم و يطوف ألاً حياء مع الأولاد و كن كل من  
رأه أعجب بذكائه و جماله و نور محياه \*

2. Give an account of Jabalah's interview with the Caliph 'Umar, his conversion to Islam, and his migration to al-Madinah. 10

3. Translate into English either (a) or (b):

15

(a)	مضناك جفاك مرفده	و بكاه و رحم عوده
	حيران القلب معذبه	مقروح الجفن مسهده
	أردى حرقاً إلا رمقا	ينقيه عليك و تنفده
	يستهمى الورق تأرؤه	و يذيب الصخر تنهده
	ويناجى النجم ويتبعه	و يقيم الليل و يقعه
	و يعلم كل مطروقة	شجنا فى الدوح تردده
	كم مدلطيفك من شرك	و تأدب لا يتصيده
	فغسلك بغض مسعفه	و لعل خيالك مسعده
	الحسن حلفت بيوسته	و السورة أنك مفرده

(b) شبهتها بلقيس فوق سريرها \* فى نضرة و مراكب و جزارى  
أر بابت دارد و راسع ملكه \* و معالم لسلعز فيه كبار  
هوج الرياح خراشع فى بابها \* و الطير فيه نواكس المنقار  
قامت على ضاحى الجذائ كانها \* رضوان يزجى الخلد للأبرار  
كم فى الخماثل و هى بعض إمائها \* من ذات خاخال و ذات سوار

ر حسيرة عنها الثياب ر بضّة \* في الناعمات تجرّ فضل ازار  
 وضحك سنّ تملأ الدنيا سني \* ر غريقة في دمعها المدار

4. Compare *Shauqi's* poetry with that of some of his important contemporaries. 10

#### SECOND HALF

1. Write an essay on *one* of the following subjects:— 50

- (a) *Hadīth* as a science and the origin of other branches of Arabic literature.  
 (b) Biographical literature in Arabic.  
 (c) The propagation of Islam in India since early times.  
 (d) Modern social and political reforms in Islam.

(GROUP A.)

#### (Literature.)

#### FIFTH PAPER

Examiners— { Mr. A. F. M. ABDUL KADIR, M.A.  
 Prof. MUHAMMAD SHAFI, M.A.(CANTAB).

*The questions are of equal value.*

#### FIRST HALF

*Answer THREE questions only, one of which must be Question 1 or 3.*

1. Translate into English, explaining where necessary:—

(a) رانى كفانى فقد من ليس جازيا  
 بنعمى ر لا فى قربه متعلل  
 ثلاثة اصحاب فؤاد مشيع  
 ر ابيض اصليت ر صفراء عيطل  
 هتوف من الملس المترن تزينا  
 ر صائع قد نيطت اليها ر محمل  
 اذا زل منها السهم ائت كانها  
 مرزاة تكللى قرن ر تعول

لعمرك ما بالارض ضيق على امرء  
سرى راغبا او هاربا و هو يعقل  
وفي الارض منأى للكريم عن الانى  
و فيها لمن خاف القلى متحول

(b) و ليلة نحس يصطلى القوس ر بها  
و اقطعه اللاتي بها يتنبل  
دغشت على غطش و بغش و صحتى  
سعار و ارزى زو و جرر افك  
فايمت نسرانا و يتمت الدة  
و عدت كما ابدات و الليل اليل

2. 'The verses of Shanfará in his *Lámiyya* are original, natural, rich, and soul-felt.' Justify or criticize this remark.

3. (a) Explain in English or Arabic, with reference to the context:—

فاقسى بالبيت الذى طاف حوله \* رجال بنوه من قریش و جرهم  
يمينا لنعم السيدان و جدتما \* على كل حال من سحيل و مبرم  
تداركتما عسا و ذبيان بعد ما \* تفانوا و دقوا بينهم عطر منشم  
و اصبحتما منها على خير موطن \* بعيدين فيها من عقوق و مائم  
عظيمين فى عليا معد و غيرها \* و من يستبج كذرا من المجد يعظم

(b) Write notes on the words and phrases overlined.

4. Describe carefully the historical background of the *Mu'allaga* of Zuhair.

5. Write an appreciative note on the poetry of Zuhair, illustrating your own points with such quotations from the poet as you remember.

## SECOND HALF

Answer THREE questions, of which one must be Question 1, 2 or 3. Do not attempt Question 4, if you have attempted Question 5 in the First Half.

## 1. Explain in English:—

قد جعل المبتغون الخير في هرم \* و السائلون الى ابوابه طرقا  
ان تلق يوما على علانه هوما \* تلق الساحة منه و الذنى خلقا  
وليس مانع نى قربي و نى رحم \* يوما و لا معدما من خابط و رقا  
ليث بعثر يصطاد الرجال اذا \* ما كذب الليث عن اقرانه صدقا  
يطعنهم ما ارموا حتى اذا اطعنوا \* ضارب حتى اذا ما ضاربوا اعتنقا  
هذا و ليس كمن يعيى بخطته \* وسط الذنى اذا ما ناطق نطقا  
لو نال حى من الدنيا بمنزلة \* وسط السماء لذات كفه الا فقا

## 2. Translate into English:—

و ابيض فياض يدهاه غمامة \* على معنفيه ما تغب فواضله  
بكرت عليه غدوة فرأيته \* قعود لديه بالصريم عواذله  
يفدينه طورا و طورا يلمنه \* و اعي فما يدري اين مخا تله  
فاقصرن منه عن كـريم مرزء \* عزوم على الامر الذى هو فاعله  
اخى ثقة لا تتلف الخمر ماله \* و لكنه قد بهلك المال نائله  
تراه اذا ما جئته مستهلا \* كذلك تعطيه النى انت سائله  
و نى نسب ناء بعيد و صلته \* بمال و ما يدري بانك راصله

## 3. Explain in Arabic or English:—

اذا ابتدرت قيس بن غيلان غاية \* من المجد من يسبق اليها يسرد  
سبقت اليها كل طلق مبرز \* سبورق الى الغايات غير مجلد  
كفضل جواد الخيل يسبق عفوه \* السراع وان يجهدن يجهد و يبعد  
تقى تقى لم يكثر غنيمته \* بنهكة نى قربي و لا بحقلد

سرى ربع لم يأت فيه مخانة \* و لا رهقا من عائد متهود  
فلو كان حمد يخلد الناس له تمت \* ولكن حمد الناس ليس بمخلد  
و لكن منه باقيات و راثية \* فأورث بنيك بعضها و تزود

4. Discuss the following remark of Muḥammad b. Sallām al-Jumāhī about the poetry of Zuhair :—

من قدم زهيراً احتج بأنه كان أحسنهم شعراً و أبعدهم من سخف و اجمعهم  
لكثير من المعانى فى قليل من الالفاظ و أشدهم مبالغة فى المدح و أكثرهم  
امثالاً فى شعره \*

5. Comment in Arabic on the words overlined in the following passage, and rewrite it in your own Arabic :—

ان الخليط اجد البين فانفرقا \* و علق القلب من اسماء ما علقا  
و اخلفلك ابنة البكرى ما وعدت \* فأصبح الجبل منها و هذا خلقا  
قامت تبدى بنى ضال لتحرز ننى \* و لا محالة ان يشقائق من عشقا  
بجيد مغزلة أدماء خاذلة \* من الظباء ترعى شادنا خرقتا

(GROUP A.)

#### SIXTH PAPER

Examiners— { KHWAJA ABDUL WAJID, M.A.  
DR. MUZZAM HUSSAIN, M.A., D.Phil.

The questions are of equal value.

Questions 1 and 5 are compulsory; not MORE THAN FOUR of the remaining questions are to be answered.

1. Does the *Lāmiyyat-ul-'Ajām*, in your opinion, possess the same merit as the *Lāmiyyat-ul-'Arab*? Describe the life led by some of the 'Vagabond Poets', and account for their existence in early Arab society.

2. Write in Arabic a critical note on the life and work of the author of the *Lāmiyyat-ul-'Ajām*.



## 8. Explain : —

تبيت نار الهوى منهن فى كبد	حرى و نار القوى منهم على جبل
يقتل أنضاء حب لا حراك بها	وينحرون كرام الخيل و الابل
يشفى لديغ الغوانى في بيوتهم	بنهلة من غدير الخمر و العسل
لعل المامة بالجزع ثانية	يدب منها نسيم البرء فى علل
لا اكره الطغة الذجلاء قد شغعت	بردفة من نبال الاعين النجل
ولا اهاب الصفاح البيض تسعدنى	باللمع من صفحات البيض فى كلل
ولا اخل بغزالان اغماز لها	ولو بهننى اسود الغيل بالغيل

## 4. Comment on the expressions underlined in the above passage.

## 5. Discuss :—

...

قال محمد بن يزيد : " كان مسلم بن الوليد شاعرا حسن النمط جيد القول فى الشراب وكثير من الرواة يقرنه بابى نواس فى هذا المعنى وهو الذى عقد هذه المعاني الطريقة واستخرجها " \*

## 6. Estimate the position of Muslim b. al-Walid amongst the poets of the early Abbasid period.

## 7. Translate into English, adding explanatory and other notes where necessary, any one of the following passages :—

- (a) ومجهل كاطراد السيف محتجز \* عن الاداء مسجود الصياخيد  
 تمشى الرياح به حسرى مولهة \* حيرى تلوذ با كفاف الجلاميد  
 مرقف المتن لا تمضى السبيل به \* الا التخلل ريثا بعد تجهيد  
 قريذه الوخد من خطارة سرج \* تقوى الفلاة بارقال و توخيد  
 اليك باردت اسفار الصباح بها \* من جنم ليل رحيب الباع ممدود  
 و بلدة ذات غول لا سبيل بها \* الا الظنن و الا مسرح السيد  
 كأن اعلامها و الال يركبها \* بدن توا فى بها نذر الى عيد

(b) يوما هفت فيه الاعاجم واحتسى \* جرع الحمام الفضل غير معد  
 نهضت بهم عقب الزمان فانجذت \* سيف الدليل على الاغر الانجد  
 لما تمخضت المنرون لثما \* رتعضت بالناكت المتنمرد  
 ما غاب حتى آب تحت لوائه \* راب الذاي وصلاح امر المفسد  
 دعم الامام به قواعد ملكه \* ولقد تطرقها انكس الماحد  
 رحفت لهم اراؤه بمكيدة \* من تحت سطوة ليث غاب ملبد  
 يقضى على مهج النفوس وان ثأت \* بصريمه من عزم رأى محصد

8. Rewrite in your own Arabic, bringing out the sense as clearly as possible :—

*Either,*

(A)

ر سلافة صباء بنت سلافة صفراء لما تعصر التسليلا  
 أختان واحدة هى ابنة اختها كلثهما تدع الصحيح عليلا  
 لا تسقنى الماء القراح وهاتها عذراء صافية الاديم شمولا  
 خرقاء يرعش بعضها من بعضها لم تتخذ غير المزاج حليلا  
 سلت فسلت ثم سل سليلها فأتى سليل سليلها مسلولا  
 بعثت الى شر الضمير فجاءها سلسا على هذا اللسان مقولا  
 لطف المزاج لها فزين كسها بقلادة جعلت لها اكليلا  
 قتلت فعاجلها المدير فلم تفظ فاذا به قد صيرته قتيلا

*Or,*

(B)

و شادن قال هالك الكس قلت له هات اسقنى من نتاج الماء والعذب  
 فقام يسعى الى دن فسللها حمراء بكرا لها عشر من العقب  
 محجونة من عيون الناس ليس لها فى غير بيت بنى ساسان من نسب  
 كانها ر صبيب الماء يقرعها در تحدر من سالك على نهب

لم يغذها بمصيف القيظ بالعباءة  
كانت ذخيرة دهقان يرضى بها  
يدعى اباه و يغذها فيأعجبها  
من ابنة صيررها غذية لأب  
او عذبر الهند او طيبا من السخب  
ولا غذاها ببحر الشمس والهب

(GROUP A.)

### SEVENTH PAPER

Examiners— { MAULVI ABU USMAN KHALID.  
Khan Bahadur MAULVI MUHAMMAD MUSA, M.A.

The questions are of equal value.

Answer Question 9 and ANY FIVE of the remaining questions.

1. Mention some special features of al-Jahiz, which distinguish him from earlier writers.

2. (i) Write notes on :—

(a) الكميّة والطرح (b) بشار الاعمى

(ii) Define and discuss البلاغة according to al-Jahiz.

3. Explain any three with reference to the context :—

(a) لقد زارى المقابر من شريك \* كثير تحلم وقليل عاب

صموتا فى المجالس غير عي \* جديراً حين ينطق بالصواب

(b) ابا حذيفة قد ارتيت معجبة \* من خطبة بدت من غير تقدير

وان قولاً يروق الخالدين معا \* لمسكت مخرس عن كل تعبير

(c) من كان ذا عضد يدرك ظلامته \* ان الذليل الذى ليست له عضد

تستبريداه اذا ما قلنا صره \* ويأنف الضيم ان اثرى له عدد

(d) العين تبسبى النى فى نفس صاحبها \* بهن المحبة او بغض اذا كا

والعين تنطق والافواه صامتة \* حتى ترى من ضمير القلب تبيان

4. Define and discuss التشبيه according to ابو الفرج فدامة بن جعفر, and give some instances of التشبيه فى التصرف.

5. Explain the following :—

- (a) انى سترحل بالمطى قصائدى \* حتى تحل على بنى رقاء  
 مدحاً لهم يتوارثون ثناءها \* رهن لاخرهم بطول بقاء  
 حلما فى النادى اذا ما جئتهم \* جهلاء يوم عجاجة و لقاء  
 من سالموا نال الكرامة كلها \* اوحاربوا الوى مع العنقاء  
 (b) تزور امرؤ يعطى على الحمد ما له \* و من يعط اثمان المكارم يحمد  
 يرى البخل لا يبقى على المرء ما له \* و يعلم ان المال غير مخلد  
 كسب و متلاف اذا ما سألته \* تهلل و اهتز اهتزاز المهند  
 متى تأتته تعشر الى ضوء ناره \* تجد خير نار عندها خير مرقد.

6. قال ابو محمد عبد الله بن مسلم بن قتيبة رحمه الله تدبرت الشعر فوجدته اربعة اضرب \*

Mention and define the four classes of poetry referred to above. Give instances of each.

7. Explain any two of the following :—

- (a) و كن حق هذا الكتاب ان اودعه الاخبار عن جلالة قدر الشعر و عن  
 من رفع بالمديح و عن من وضع بالهجاء و عما اودعته العرب من الاخبار النابذة  
 و الاحساب الصالح و الحكم المضارعة لحكم الفلاسفة و العلوم فى الخيل  
 و فى النجوم و انرائها و الاهنداء بها و الرياح و ما كن منها مبشرا او حائلا  
 و البروق و ما كن منها خلبا او صادقا و السحاب و ما كن منها جهاما او ماطرا  
 و عما يبعث البخل منها على السماع و الدنىء على السمور و الجبان على  
 اللقاء - غير انى رأيت ما ذكرت من ذلك فى كتاب العرب كثيرا كافيا فكرهت  
 الاطالة باعاده \*

(b) سمعت بعض اهل العلم يقول ان مقصد القصيدة انما ابتدأ فيها بذكر الديار والدمع والاثار - فشكا وبكى وخاطب الرب واستوقف الرفيق ليجعل ذاك سببا لذكر اهلها الطاعين عنها اذ كان نازلة العمد فى الحلول والظعن على خلاف ما عليه نازلة المدر لا نتجاعهم الكلاء وانتقالهم من ماء الى ماء وتنبعهم مساقط الغيث حيث كان ثم وصل ذلك بالنسيب فشكا شدة الشوق والم الوجد والفراق وفرط الصبابة ليميل نحوه القلوب و يصرف اليه الرجوة ويستدعى به اصغاء الاسماع اليه \*

(e) بعثتك مشتاقا ففرت بنظرة \* واغفلتني حتى اسأت بك الظنا وناليت من اهوى وكنت مقربا \* فياربج نفسى عن دنورك ما اغنى وردت طرفانى مكاسن وجهها \* ومنعت باستسماع نغمتها اذنا ارى اثرها منها بعيدك لم يكن \* لقد سرقت عينك من عينها حسنا

8. Explain any six of the following :---

(a) الاكفاء (b) الاخلال (c) التخلع (d) اللققات

(e) فى كفه خيزران ريحه عبق \* من كف اروع فى عرينه شم  
(f) ومابى من عى ولا انطق الخذى \* اذا جمع القوام فى الخطب محمل  
(g) وعين الفتى تبدى الذى فى ضميره \* وتعرف بالنجوى الحديث المغمسا  
(h) دع عنك لومى فان اللوم اغراء \* ودارنى بالتي كانت هى الداء

9. Compare and contrast مسلم بن قتيبه and فدايمة بن جعفر as critics of Arabic poetry, giving some of their canons of literary criticism that may be gathered from your text books.

## (GROUP A)

## EIGHTH PAPER

Examiners—MAULANA FAZLUL RAHMAN BAQI.  
MR. A. H. HARLEY, M.A.

*The questions are of equal value.*

*Answer ANY THREE questions from EACH part.*

## PART I.

1. (a) Translate into English:—

سمرت بالكوفة فى ليلة اديمها ذلولين و قمها كنعويذ من لجين مع.  
رفقة غنوا بلبلان البيان و سحبوا على سحبان ذيل النسيان ما فيهم الا من يحفظ  
عنه ولا يتحفظ منه و يميل الرقيق اليه ولا يميل عنه فاستهوا انا السمر الى ان  
غرب القمر و غلب السهر فلما روق الليل البهيم و لم يبق الا التهوريم سمعنا من  
الباب نبأة مستنديم ثم تلاها صكة مستفتح قلنا من الملم فى  
الليل المدلهم فقال \*

يا اهل ذا المغنى و قيمتم شرا و لا لقيمتم ما بقيتم ضرا  
قد دفع الليل الذى اكفهر الى ذراكم شعنا مغبرا  
اخا سفار طال و اسبطرا حتى انثنى محقوقفا مصفرا  
مثل هلال الافق حين افترا و قد عرا فناءكم معترا

(b) Point out the difference between لبلن and بلبلان.

(c) Write a note on the form of Arabic quadriliteral verbs.

(d) Write notes on مستنديم and سحبان.

2. (a) Render the following in simple Arabic:—

فطفقت احرب طرقتها مثل الهائم و اجول فى حرما تما جولان العائم و  
ارد فى مسارح لمحاتي مسايم غدواتي و روحاتي كريما اخلق له ديباجتي و  
ابرح اليه بجاجتي او اديبا تفرج رؤيته غمتي و ترورى روايته غلتى حتى  
ادتنى خاتمة المطاف و هدتنى فاتحة الاطاف الى ناد زحبيب معتر على

زحام و نحيب فولجت غابة الجمع لا سبر مجلبة الدمع فرأيت في بهرة الخلقة  
 شخصا شخت الخلقة عليه اهبة السياخة و له رنة النياخة و هو يطبع الاسجاع :  
 بجواهر لفظه و يقرع السماع بزاجر و عظه \*

(b) Describe any dramatic elements you find in the *Maqāmāt*.

3. (a) Translate into English, adding explanatory notes where necessary :—

اكرم به اصفر راقص صفته	جواب آفاق ترامت سفرته
مأثرة سمعته و شهـ رته	قد اودعت سر الغنى اسرته
و قارنت نجم المساعي خطوته	و جبت اليه الا سام غسوته
كانما من القلوب نقرته	به يصرل من حوته ربه
و ان تقانت او توانت عذته	يا حبذا نصاره و نصوته
و حبذا مغنائه و نصوته	كم أمر به استتبت امرته
و متوف لولاه دامت حسرته	و جيش هم هزمته كـ رته
و بدرتم انزلته بدرته	و مستشيط تتلظي به
اسر نجواه فلانت شرته	و كم اسير اسلمته اسرته
انقذه حتي صفت مسرته	و حق مولاي ابدعته فطرته

لولا النقي لقلت جلت قدرته

(b) What are the merits of al-Haīrī as a writer of verses ?

4. Explain the following verses of **ابو الفرج الرواء الدمشقي** and **الحريري** and point out their respective merits :—

فامطرت لؤلؤا من نرجس و سقت ( الرواء الدمشقي )  
 وردا و عصت علي العذاب بالبرد  
 فزحزحت شققا غشي سنا قمر ( الحريري )  
 و ساقطت لؤلؤا من خاتم عط

5. Give an account of the life of **الحربى**, and write a critical appreciation of his **مقامات**. Has his style had any influence on literary or journalistic Arabic ?

## PART II.

1. (a) Translate into English :—

ان ملكا من الملوك قبلك خرج في عام مثل عامك هذا الي الخورنق و السدير في عام قد بكر و سميّه و تتابع و ليّه و اخذت الارض زينتها علي اختلاف الوان نبتها في ربيع مؤنق فهو في احسن منظر و احسن مختبر بصعيد كنّ ترابه قطع الكافور و قد كن أُعطي فناء السنّ مع الكثرة و الغلبة و القهر فنظر فابعد النظر ثم قال لجلسائه لمن مثل هذا هل رايتم مثل ما انا فيه - و عنده رجل من بقايا حملة الحجّة و المضيّ علي ادب الحق و منهاجه فقال ايها الملك ارايت هذا الذي انت فيه اشئ لم تزل فيه ام شيء صار اليك ميراثا و هو زائل عنك و صائر الي غيرك كما صار اليك قال كذلك هو قال فلا اراك الا عجبت بشيء يسير تكون فيه قليلا و تغيب عنه طويلا و تكون غدا بحسابه مرتها \*

(b) What is the significance of the narrative from which the above passage has been taken?

(c) Write a note on **الخورنق**, and state to what extent the Arabs utilized in their poetry such legendary matter available in pre-Islamic tradition.

2. (a) Translate into English :—

حجّ عمر بن ابي ربيعة في عام من الاعوام علي نجيب له مخضرب بالخذاء مشهرّ الرجل بقراب مذهب و معه عبيد بن سريج علي بغلة له شقراء و معه غلامه جذاد يقود فرسا له ادهم اغبرّ محجلا و كان عمر بن ابي ربيعة يسميه الكوكب في عنقه طرق ذهب و مع عمر جماعة من حشمة و غمانه و مواليه و عليه حلة مرشاة يمانية و علي ابن سريج ثوبان هرريان مرتفعان فلم يمرزا باحد



الا عجب من حسن هيئتهم و كان عمر من اعطر الناس و احسنهم هيئة فخر  
جوا من مكة يوم التروية بعد العصر يريدون منى \*

(b) Write an account of عمر بن ابي ربيعة and his poetry.

(c) Write notes on the terms underlined in the above passage.

3. (a) Translate into English :—

ان الحجاج كان استعمل خالد بن عتاب علي الري و كانت امه ام و لد  
فكتب اليه الحجاج يسب امه و يقول انت الذي هربت عن ابيك حتي  
قتل و قد كان حلف ان لا يسب احد امه الا اجابه كاذبا من كان فكتب اليه  
خالد كتبت الي تشتم امي و تزعم اني فررت عن ابي حتي قتل و لعمر  
لقد فررت عنه و لكن بعد ان قتل و حين لم اجد لي مقاتلا و لكن اخبرني  
عنك يا لكيم حين فررت انت و ابوك يوم الحرة علي جمل ثفال ايكما كان  
امام صاحبه فقرأ الحجاج الكتاب و قال صدق \*

انا الذي فررت يوم الحرة ثم ثنيت كرة بفره  
و الشيخ لا يفره الا مرة

(b) Answer any three of the following :—

(1) Scan the lines in the above passage and state what kind of 'foot' forms the basis of the metre.

(2) What importance attaches to the oldest *Rajaz*-poems?

(3) How long did this *Rajaz*-poetry continue, and what vogue had it among the Arabs?

(4) Mention the characteristics of this class of poetry.

4. (a) Translate into English :—

فدخل فاني الرسالة و قد اناخ الجزور بالباب و وضع الزق و البردين  
بين يديه - قال اقِرّ السلام و قل له و صلتك رحم سيانك ثناونا و قام الغتان  
الي الجزور فنحروها و شقوا خاصرتها عن كبدها و جلدوها عن سنامها ثم جاؤا

بهما فاقبلوا يشورون و صبوا الخمر فشربوا و أكل العشي معهم و شرب و لبس  
البردين و نظر الي عطفيه فيهما فانشأ يقول -

«أرقت و ما هذا السهاد المؤرق» حتي انتهى الي قوله  
أبا مسمع سار الذي قد فعلتم فانجد اقوام به ثم اعرقوا  
به تعقد الا جمال في كل منزل و تعقد اطراف الحبال و تطلق  
قال فسار الشعر و شاع في العرب \*

(b) Write an account of الاعشى and his poetry.

(c) Write a note on the traffic in wine in Arabia, and the manner of retailing it.

5. (a) Write an account of the author of كتاب الاغانى and state his object in composing this work.

(b) To what extent can it be regarded as a source of authentic historical information?

(c) Was Arabia in early times indebted to external sources for music or musical instruments?

(GROUP E)

#### FIFTH PAPER

Examiners— { PROF. M. Z. SIDDIQI, B.A., PH.D.  
DR. ZAHIRUDDIN AHMED-AL-JAMH, D.LITT.

*The figures in the margin indicate full marks.*

*Answer Question 1 and ANY FIVE of the remaining questions.*

1. *Either,*

Explore the chief points of variance between الفلسفة الاشراقية and علم السلام, and show which of the two systems is, in your opinion, the more convincing. 20

*Or,*

Determine the aims of al-Shaykh-al-Maqtul in writing his *هياكل النور*, and estimate how far he has been successful in his main object. 20

2. Estimate the extent of success achieved by the enemies of al-Shaykh-al-Suhrawardy in decreeing his execution, and discuss the propriety of their فتارى in the light of Islamic teaching. 16

3. "ان النفس لا تبطل بطلان البدن". Compare the arguments by which the متكلمين and اشرقيين establish the above principle. Which of them are you inclined to favour, and why? 16

4. "و السبب اذا تم لا يتخلف عنه وجود المسبب" says al-Shaykh-al-Maqtul. "كل الله ولم يكن معه شيء" says the Prophet of Islam. 16

How do you reconcile the apparent contradiction between the two?

5. Explain the following passage fully:— 16

"الا جسم تشاركت فى الجسمية و تفاوتت فى الاستنارة فالنور عارض للجسام و نورية الاجسام ظهر لها و لما كان النور العارض قيامه بغيره و ليس وجوده بنفسه فليس ظاهرا لذاته فلو قام بنفسه لكان نوراً لنفسه" \*

6. Elucidate the main argument put forward in the following passage:— 16

"و يدل على اثبات الاجرام السماوية و كونها غير مركبة من العنصرات و امنها من الفساد و جوب دوام حركاتها و لو كانت مركبة لتحللت و ما دامت حركاتها فهى غير عنصرية اصلاً" \*

What other evidence can you adduce in support of the above?

7. Explain fully, the following passage, in the light of your text-book:— 16

"اول نسبة ثابتة فى الوجود نسبة الجوهر القائم الموجد الى الاول القيوم فهى ام جميع النسب و اشرافها و هو عاشق الاول و الاول قاهر له بقيوميته قهراً يعجز عن الا حاطة به و الاكتناه لنور كنهه" \*

8. Explain the following passage, and annotate the words underlined:— 16

"ان النفس الذلقة من جوهر الملكوت و انما يشغلها عن عالمها هذه القوى البدنية و مشاغلها فاذا قريت النفس بالفضائل الروحانية و ضعف سلطان القوى البدنية بتقليل الطعام و تكثير السهر تتخلص احياناً الى عالم القدس و تتصل بابيها المقدس و تتلقى منه المعارف و تتصل بالنفوس الفلكية العالمة بحركاتها و بلوازم حركاتها" \*

9. Explain any five of the following terms :—

16

- (١) العقل الفعال ( ) الوجود المطلق (3) الوجود الإضافي  
 (4) الصورة الجسمانية (5) الصورة النوعية (6) الحدث الذاتي  
 (7) عالم الكون و الفساد (8) المسائل التجريدية  
 (9) الجسم التعليمي \*

(GROUP E)

### SIXTH PAPER

Examiners— { VISCOUNT SANTA CLARA.  
 MAULVI MD. MUSA, M.A.

*The questions are of equal value.*

Answer ANY SIX questions.

Question 8 is compulsory.

1. Explain the principles of physical things according to Ibn Sina's philosophy.
2. What is Ibn Sina's theory of movement and of time?
3. Give a sketch of his doctrine of the soul, its kinds and powers.
4. What is the theoretical and the practical intellect according to Al Najat?
5. What is the Necessarily Existent, and what are His attributes?
6. Explain and criticize Ibn Sina's theory of creation.
7. Discuss Ibn Sina's theory of good and evil, virtue and vice.
8. Give in Arabic the technical meanings of the following terms :—

الممكن - المستحيل - الجوهر - العرض - الصورة - المادة - الصورة المادية -

الصورة المفارقة - الهيولى - الجسم - الحال - المعلى \*

## (GROUP E)

## SEVENTH PAPER

Examiners— { MAULVI ABU USMAN KHALID.  
DR. ZAHIRUDDIN AHMAD-AL-JAMII, D.LITT.

*The figures in the margin indicate full marks.*

1. What evidence can you adduce for "ان مدبر العالم واجب الوجود" 16
2. What are the various views held by الفلاسفة، الثنوية، عامة المتكلمين، and المجوس on the statement "ان الله تعالى قادر على كل المقدرات" 16  
How far do you agree with الرازى in thinking that every school of thought except his own is against the above statement ?

Or,

Compare and contrast the attitude of الفلاسفة and المتكلمين towards God's omniscience. 18

3. What do you know about Ghazali's system of philosophy ? To which of المتزلة and الاشاعرة do you think he approaches most nearly ? Give rea- 16

4. Discuss Valiallah Dehlavi's contention that miracle-working is not proof of prophethood in the light of your text-book. 16

Or,

What are the various opinions regarding life after death among the متكلمين and فلاسفة ? With whom do you agree, and why ? 16

5. Elucidate the views of Aristotle and Plato regarding the eternity of the human soul. Which of them do you think influenced المتكلمين most, and why ? 16

6. Explain in English any two of the following :— 18

(a) انه تعالى ليس فى شىء من الجهات خلافا للكرامية - لذا انه ليس بمتكيز و لا حال فى المتكيز و ما كان كذاك لم يكن فى جهة اصلا و ذلك معلوم بالضرورة ، لان مكانه تعالى ان سائر سائر الا ممكنة كان اختصاصه به دون سائر الا ممكنة يستدعى مخصصا و ذلك المخصص لا بد ان يكون مختارا و كل ما كان فعلا لفاعل مختار فهو محدث فكونه فى الممكن محدث هذا خلف

و ان خالف سائر الامكنة كان ذلك الممكن موجودا لان الاختلاف فى النفسى المحض محال و ذلك الموجود ان لم يكن مشارا اليه لم يكن الموجود فيه مشارا اليه فان كان كونه كذلك بالذات كان جسعا فاذا فرضنا الله تعالى موجودا فيه كان البارئ تعالى حالا فى الجسم و هو محال \*

(b) محمد رسول الله خلافا لليهود و انصارى و المجوس و جماعة من الدهرية - لنا وجوه الاول انه ادعى النبوة و عليه التعريل و ظهر المعجز على يده و كل من كان كذلك كان نبيا و انما قلنا ادعى النبوة للتواتر و انما قلنا انه ظهر المعجز على يده فثلاثة اوجه احدها انه اتى بالقرآن و القرآن معجز اما انه اتى بالقرآن و لم يات به غيره ثانيا لتواتر اما انه معجز فلانه تحدى الفصحاء بمعارضته فعجزوا عنه و ذلك يدل على كونه معجزا و ثانيها انه نقل عنه معجزات كثيرة منها اشباع الخلق الكثير من الطعام القليل و نبوع الماء من بين اصابعه و مكاملة الحيوان العجم و كل واحد منها و ان لم يبلغ مبلغ التواتر لكن التواتر يدل على صحة واحد منها و اى واحد منها صح حصل الغرض \*

(c) الايمان عندنا لا يزيد و لا ينقص لانه لما كان اسما لتصديق الرسول فى كل ما علم بالضرورة مبيته به و هذا لا يقبل التفات فكل مسمى الايمان غير قابل للزيادة و النقصان و عند المعتزلة لما كان اسما لا داء العبادات كان قابلا لهما و عند السلف لما كان اسما للاقرار و الاعتقاد و العمل وكذلك و البحث لغوى و لكل واحد من الفرق نصوص - و التوفيق ان يقال الاعمال من ثمرات التصديق فكل ما دل على ان الايمان لا يقبل الزيادة و النقصان كان مصروفا الى اصل الايمان و ما دل على انه قابل لهما فهو مصروف الى الابدان الكامل \*

## (GROUP E)

## EIGHTH PAPER

Examiners— { VISCOUNT SANTA CLARA.  
DR. AZIMUDDIN AHMAD, PH. D.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. What are the main sources of Islamic philosophy?
2. Expound the main teachings of Al Ashari.
3. Give a short account of the Ikhwan-us-Safa's organization and of their ethics.
4. Discuss the main theories by which Averroes differs from the other Moslem Peripatetic philosophers.
5. Trace the growth of the factors of 'Ilmu'l-Kalām till they were finally formulated by 'Imām Al-Ghazālī.
6. Discuss the position of Al-Fārābī among Muslim philosophers, and give the substance of his philosophy.
7. What position did Muslim philosophy occupy in Europe before the Renaissance period?
8. Discuss the doctrines of al-Qadariyya and al-Jabariyya.

## PERSIAN.

## FIRST PAPER

Examiners— { PROF. M. Z. SIDDIQI, M.A., PH.D.  
{ SIR Z. R. ZAHID SUHRAWARDY, KT., M.A., B.L., BAR-AT-LAW.

*The questions are of equal value.*

*Answer only TWO questions from Group A, THREE questions from Group B, and TWO questions from Group C.*

## GROUP A

1. Discuss the development of Persian civilization under the Achæmenian dynasty, with special reference to their customs, language, and architecture.
2. Explain and discuss the various causes that led to the easy conquest of Persia by the Greeks.
3. Describe the character of Shapur the Great, and discuss his contribution to the history of Sassanian Persia and its influence on the future of the Sassanide dynasty.

## GROUP B

4. Compare the position of the Persians under the Umayyads with that under the Abbasides.

5. Who were the Assassins? Give a short history of their dynasty till their extirpation.
6. Describe the character and career of Ghazan Khan, and discuss the beneficence of his rule.
7. Who was the greatest king of the Safavi dynasty? Give a short history of his reign.

## GROUP C

8. Estimate the influence of Muslim rule on the social life, culture, and civilization of India.
9. Comment on the character and reign of *Firoz Shāh*.
10. Describe briefly the advent of the British in India during the Mughal rule.

## SECOND PAPER

Examiners— { MAULVI MD. ISHAQUE, M.A., B.Sc.  
 DR. WAJAHAT HUSSAIN ANDALIB SHADANI,  
 M.A., M.O.L., H.P., PH.D. (LOND.)

*The questions are of equal value.*

*Answer ANY SIX of the following questions.*

1. Trace the origin of Persian poetry, and survey its gradual development to the close of the 10th century A.D.
2. 'The flabby, inflated, bombastic style has always tended to prevail where the patrons of Persian literature have been of Turkish or Mongolian race.' Discuss.
3. Compare the *Shahnama* of Firdausi with the *Sikandar Nama* of Nizami.
4. Describe Nasir-i-Khusrau's religious and philosophical views that form the main subject of his verse.
5. Give a critical estimate of a well-known مثنوی written in India during the 16th century A.D.
6. 'Under the patronage of the Great Mughals the Persian poets and writers of Indian origin had developed a style of their own. Comment on the above statement, and give the distinguishing features of the so-called Indian Style.
7. How do you account for 'the revival of poetry and the restoration of a better literary taste' during the Qājār period?
8. Sketch briefly the life of عرفی, and determine his place among his contemporary poets.
9. Sketch briefly the life of رودکی, and compare him with the important contemporary poets. How did he come to assume the poetic name of رودکی?
10. Did any one except Firdausi take a part in the compilation and completion of the *Shahnameh*? If so, to what extent?



## THIRD PAPER

Examiners— { MR. L. BOGDANOV.  
DR. A. S. SIDDIQI, M.A., PH.D.

The figures in the margin indicate full marks.

## FIRST PART.

1. Define any five of the following:—

عجز - حشو - رقص - خبن - تاسیس - روی

2. Explain and illustrate:—

علت - تزییل - رتد - مفروق - فاصله

Or,

Enumerate and illustrate the جوازاٹ شعری

3. Scan and name the metre:—

(a) مثال گرسنه چشمان شکم پرست مبداش  
که می دهد تعب آن پیرهن که دارد آتش

(b) بغیة شبنم و گل بر رخ کار افتاد ست  
ورنه حیران تو صاحب نظری نیست که نیست

4. Define and give examples of—

حسن تغلص - ارسال مثل - تجاهل عارف - حسن تعلیل

5. Name and explain the rhetorical figure in the following verses—

(a) عارضش را بمثل ماه فلک نتوان گفت

نسبت دست بهر بی سر و پا نتوان کرد

(b) شد ز مردم تہی کنار چہاں خاک را پر نشد هنوز شکم

6. Give the three historical periods of Iranian, setting out the chief characteristics of each period.

7. Trace the history of the معنّفیہ های of the Persian.

Or,

Give the etymology of:—

شہر - ہاسع - ہاسک - شاہ - شطرنج - دیہیم

8. Write a note on the influence of the Persian language either on the Bengali or the Urdu language.

## SECOND PART

## 1. Translate into English:—

20

(a) محمد بن علی سرزنی، که درجد و هزل و رقیق و جزل نادره زمان و اعجوبه گیهای بود و مولد او نصف بود و روح عنصری از رشک او در اسف، به بفارا به تحصیل علم آمد و مدتی در مدرسه بود و در تعلم خوض نمود و طبعی لطیف داشت چنانچه در هرچه تصرف کردی آنرا به اتمام رسانیدی - اگرچه هزل بر جد او غالبست فاما دو سه قصیده توحید که گفته است و عذر آن خواسته امید باشد که بدان سبب خداوند عز و جل بر وی رحمت کند \*

(b) گیتی خداوند آرزومندان تپیدست را نقد و جنس بر دهد و آشکارا و پنهان دلها بدست آرد فراوان مردم را روزینه و ماهیانه و سالیانه مقرر باشد و بی زنج انتظار کامیاب گردانده و آنچه هر روز نزدیکان درگاه عرض احوال مردم نمایند و خواسته بر گیرند بنگاشتن در نگنجد و آنچه همه روز به نیازمندان داده آید و آشغافها سر انجام یابد گزارش آن بس دراز \*

## 2. Translate into Persian either A or B:—

20

## A

The political importance of the Isma'īlīs began in the tenth century of the Christian era with the foundation of the Fātimid dynasty—the Anti-Caliphs of North Africa and Egypt—who attained and maintained their political power by a religious propaganda conducted throughout the lands of Islam, and especially in Persia by numbers of skilful and devoted *da'īs*. They taught a doctrine based on Allegorical Interpretation of the Scripture and Law of Islam of which, as they asserted, their Imāms were the sole inheritors and guardians. In essence their Inner Doctrine was philosophical and eclectic, borrowing much from old Iranian and Semitic systems, and something from Neo-Platonist and Neo-Pythagorean ideas.

## B

The Abbasid period is especially interesting for us because of the new interest in science which it started. Science, as you know, is a very big thing in the modern world. We owe such a lot to science. Science does not sit down and pray for things to happen. It is curious to find out why things happen. It experiments and tries again and again, and sometimes fails and sometimes succeeds—and so bit by bit it adds to human knowledge. The modern world of ours is very different from the ancient world. The modern world has been made by science. Among the ancients we do not find the scientific method in Egypt or China or India. We find just a bit of it in old Greece. In Rome again it is absent. But the Arabs had this scientific spirit of enquiry and so they may be considered the fathers of modern science.

## FOURTH PAPER.

Examiners— { MR. MUHAMMAD ALI SHIRAZI, M.A.  
 { DR. A. S. SIDDIQI, M.A., PH. D.

## FIRST HALF

*The questions are of equal value.*

1. How far is it possible to regard یکی برد و یکی نبرد as a literary exposition of Iranian manners and character in the language of the common people ?

Or,

Give an account of the political adventures of Haji Shaikh Jafar, in your own Persian, using modern expressions as far as practicable.

2. Explain with reference to the context:—

(a) یک طوماری از آن فحشهای آب نکشیده که مانند خریده گرگاب و تنباکوی حکان<sup>۱</sup> مخصوص خاک ایران خودمان است نذر جد<sup>۲</sup> و آباد این و آن کرد \*

(b) در تمام معله سنگلج مثل گار پیشانی سفید احدى پیدا نمیشود که پیر غلامتانرا نشناشد \*

(c) دیروز هیچکس پهن هم بارت نمیکرد امروز برضد شاه و صدر اعظم علم بلند مینمائی \*

(d) توی دلمان میدانستیم جعفر خان چند مرده حلاج<sup>۳</sup> است و لو لنگش چقدر آب میگیرد \*

3. Explain:—

(a) بسوخت سینه ندیدم اثر ز آه سحر  
 ز من گذشت کسی بعد ازین دعا نکند  
 به بلبلان چمن از زبان من گوئید  
 بغواب ناز گلم رفقه کس صدا نکند

(b) از سر کوی تو یک چند سفر باید کرد  
 ز دل اندیشه وصل تو بدر باید کرد  
 پیش از آنیکه جهان گل نکند دیده من  
 مشقت خاکی ز غم یار بسر باید کرد  
 چشم مستش ز مژه تیر بر ابرو پیوست  
 ترک مستست و کماندار حذر باید کرد

(c) خلاصی دل من از چه زنگیدانش  
همان حکایت مرست و قصه لکن است

بلای جان من آن چشم فتنه انگیز است  
سیاه روزم از آن طره شکن شکن است

(d) ز اول بنای مجلس آزادی جهان  
شرمندوتر مجلس ما پارلمان نبود

از هر دری بمجلس بین الملل سخن  
آمد میان و صحبت ما در میان نبود  
ایران بر روزگار تجدید چه داشت گر  
مفتی و شیخ و مفت خور و روضه خوان نبود

4. Give in your own Persian a sketch of the life and works of Mirza Jafar Qarajadaghi.

Or,

If you were directing the performance of the *مرافعه* what kind of person would you select to play Aqa Mardan, and what instructions would you select to play Aqa Mardan, and what instructions would you give about rendering the part ?

## SECOND HALF

Write an essay on one of the following subjects :—

50

- (a) The influence of Islam on the Persian language.
- (b) The historical literature in Persian.
- (c) The Bahá'í movement.
- (d) Characteristics of Modern Persian Poetry.

(GROUP A—LITERATURE.)

## FIFTH PAPER.

Examiners— { MAULVI ABU USMAN KHALID.  
DR. WAJAHAT HUSSAIN ANDALIB SHADANI,  
M.A., M.O.L., H.P., Ph.D.(LOND.)

The figure in the margin indicate full marks.

1. How far does Naziri of Nishapur deserve the title of 'رئیس المتغزلین', the Chief of the Ghazal writers) given to him by Maulana Shibli ?

2. Translate any two of the following into English, adding explanatory notes where necessary:—

30

## A.

بدل تنگی کُذم دل خوش همیشه  
 که تنها جای غمهای تو باشد  
 نیازارم ز خود هرگز دلی را  
 که عیترسم درو جای تو باشد  
 حریفی کز خود باز بیه سازد  
 عتاب گریه فرمای تو باشد  
 نهایت نیست طومار دلی را  
 که مضمونش تمنای تو باشد  
 کدورت نیست کاخ سینۀ را  
 که راهش بر تماشای تو باشد  
 گل صد رنگ می روید ازان خاک  
 که دروی نوش صهبای تو باشد

## B.

دل با هوش دم بر من نه دهد	چشم با دوست نم بر من نه دهد
دل اسرار بین، حدیث قدیم	جز بعکم قدم بر من نه دهد
چپ نوشتند نامه حاضر باش	نشو کاغذ رقم بر من نه دهد
بگم جام شادمان گون ده	تا رخم رنگ غم بر من نه دهد
نتوان کم ز پیر تر سا بود	میرد از کف صنم بر من نه دهد
گر نگیرد قلم نظیری را	ابر سیراب نم بر من نه دهد

## C.

وقت شد سبزه فرش در پیچد  
 ابر خرگه بیکدگر پیچد  
 آفتاب از کمین بر آرد سر  
 پنجه ابر، باد بر پیچد

دیده میل بهار شد که جهان  
 بهم اوراق خشک و تر پیچد  
 تر و خشکی که کوه و صحرا راست  
 خورده لاله در شرر پیچد  
 زحمت خار و رنج خارا را  
 لاله در پاره جگر پیچد  
 بنس فزیب چمن نظیری دید  
 از بهشتش عنان نظر پیچد

## D.

باد آمد و بوی عنبر آورد      بادام شگوفه بر سر آورد  
 شاخ گل از اضطراب بلبل      با آن همه خار سر بر آورد  
 تا پای مبارکش بیوسم      قاصد ده پیام دلبر آورد  
 ما نامه بوی سپرده بودیم      او نافه مشک اذغر آورد  
 بیچاره کسی که در فراق      روی بنماز دیگر آورد  
 سعدی دل روشن صدق وار      هر قطره که خورد گوهر آورد

3. Explain in Persian any two of the following:—

18

## A.

سوی رحمت زندگان بس سیاست نگر  
 کار بسمل ز نگاهش به تپیدن نرسد  
 طره بر باد فشان عشوہ بگلزار فروش  
 در چمن سر و چمانش به میدن نرسد  
 بارخ هوش شکارش چه کمین و چه کمند  
 فکر نقشیر ز شوقش بر میدن نرسد

## B

همه آسان ز جدائی تو مشکل گردید  
 هیچ دشوار بدیدار تو دشوار نبود

بیدی در همه جا نام بر آرم که مجاد  
 خون من ریزی و گویند سزاوار نبود  
 ناله از بهر رهائی نکند مرغ اسیر  
 خورد افسوس زمانی که گرفتار نبود

## C.

امشب سبکتر میزنند این طبل بی هنگام را  
 یا وقت بیداری غلط بوده است مرغ بام را  
 یک لحظه بود آن یا شبی که عمر ما تاراج شد  
 ما همچنان لب بر لبی بر ناکرفته کام را  
 سعدی علم شد در جهان صوفی و عامی گوید آن  
 تا بت پرستی میکند آنکه چنین اضمحلال را

4. Write notes on *any five* of the following :—

7

پیر بت تراش - مفلس کنعان - معجز عیسی - قزلباس - آصف - سیمرغ - منصور \*

5. Sketch briefly the life of عمر خیام, and give an estimate of his poetry. 10

6. Was Khayyám a fatalist? Give his views on "معاد" (after life).  
 Give reasons in support of your answer. 10

7. Translate into English *any three* of the following and comment on them :— 10

## A.

ابریقی می مرا شکستی ربی      بز من در عیش را ببستی ربی  
 بر خاک بر بختی می ناب مرا      خاکم بدهن مگر تو مستی ربی

## B.

ناکرده گناه در جهان کیست بگو  
 و آنکس که گنه نکرد چون زیست بگو  
 من بد کنم و تو بد مکافات دهی  
 پس فرق میان من و تو چیست بگو

## C.

آن به که درین زمانه کم گیری دست  
 با اهل زمانه صحبت از دور نکوست  
 آنکس که بجملی ترا تکیه بدوست  
 چون چشم خرد باز کن دشمن است

## D.

امروز ترا دسترس فردا نیست  
 و اندیشه فردات بجز سودا نیست  
 ضایع مکن ایندم اردت شیدا نیست  
 نین باقی عمر را بها پیدا نیست

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(GROUP A—LITERATURE.)

## SIXTH PAPER

Examiners— { MAULVI SHAH KALIMUR RAHMAN, M.A.  
 { MR. A. GHANI, M.A., M. LIT.

*The questions are of equal value.*

N.B.—(a) Only THREE question from EACH group are to be attempted.

(b) Question 1 in EACH group is compulsory.

(GROUP I—(aQsida).)

1. (a) Translate into English with reference to the context, adding explanatory notes where necessary:—

چون برزمین طلیعه شب گشت آشکار  
 آفاق ساخت کسوت عباسیان شعار  
 پیدا شد از کرانه میدان آسمان  
 شکل هلال چون سر چوگان شهریار  
 دیدم ز زر پخته بدین لوح لاچورد  
 نوئی ست گوئی با بقلم کرده نگار



روئی فلکی چو لُجّه دریا ر ماه نو  
 مانند کشتی که ز دریا کنند گذار  
 یا بر مثال ماهی یونس میان آب  
 آهنگ در کشیدن او کرده از کنار  
 یا همچو بونس آمده بیرون ز بطن حوت  
 افتاده بر کرانه دریا نعیف و زار  
 در معرض خلاف جهانی ز مرد وزن  
 قومی در نظاره و خلقی در انتظار  
 من با خرد بعجزه خلوت شتافتم  
 گفتم که ای نَبِیُّ الطَّافِ کردگار  
 باز اینچه نقش بر العجب و شکل نادرست  
 کز کارگاه غیب همی گردد آشکار  
 آن شاهد از کجا ست که این چرخ شوخ چشم  
 از گوش او برون کشد این نغز گوشوار  
 گردون ز بازو که دریدست این طراز  
 گیتی ز ساعد که ر بودست این سوار  
 هر جرم کوکب ست چرا شد چنین دو تاه  
 و ر پیکر مهست چرا شد چنین نزار  
 گفت آنچه بر شمردی ازین جمله هیچ نیست  
 دانی که چیست با تو بگیریم باختصار  
 نعل سمنند شاه جهانست کاسمان  
 هر ماه بر سرش نهد از روی افتخار

(b) Point out the figures of speech contained in the lines 1—6 in the above extract.

2. (a) Rewrite the following in simple Persian, elucidating the allusions and metaphors :—

کرا ست زهره که با این دل ز صبر نفور  
 د افکند سغنی از وداع نیشاپور

آنچه منی شود نعره غراب و لیلی  
 چگونه فهم کند آدمی زبان طیور  
 ندانم این چه دلیریت گوئیا که غراب  
 زیار خویش نبودست هیچ شب مهجور  
 غراب را چه خبرزانکه هر شب از غم هجر  
 چگونه می گذرد حال این دل رنجور  
 حدیث بهر توان گفت با کسیکه بود  
 چو زلف یار مشوش چو چشم او مغمور  
 نه یک شب از لب لعلش چشیده طعم شکر  
 نه یک دم از سر زلفش گرفته بوی بفرور  
 گمان من همه این بود پیش ازین کخسر  
 چنین که دورم ازو از درش نمانم دور  
 دلم ز گیتی چندان حساب کز برداش  
 که راه یافت از صد هزار گونه کسور  
 مگر ز پرده برون افتاده ناله من  
 که میدهد فلکم گوشه سال چوین طنبور

(b) Write philological notes on :—

آدمی ; طنبور ; آبغور

(c) Account for the use of الف in گوئیا in the 3rd bait of the above extract.

3. Point out the chief characteristics of Zahir's قصائد, and compare him with any other Qasida-writer with whose works you are familiar.

4. (a) Scan any one of the following lines and name the metre :—

شرح غم تو لست شادی بهان دهد      ذکر لب تو طعم شکر در دهان دهد

زین هفت رباط و چار منزل      بندم به جواره پنج معل

(b) (1) چمن هنوز لب از شیر ابر ناسته

(2) از صدمت در معش فلک از پای درآمد

(3) چون طوطی لبث بعدیکی زبان دهد

(4) یکی ازین هو ندانست کفش از دستار

Comment on the idiomatic use of the underlined expressions, and explain them fully, in simple Persian, making clear the sense.

5. Distinguish between a Qasida and a Mathnawī, giving the formal and material characteristics of each. Why is the Mathnawī so named ?

#### GROUP II—( Mathnawī ).

1. Rewrite the following in simple Persian, elucidating allusions and figures of speech :—

ای دیده فروز شب نشینان \* اندیشه زدای پیش بینان  
 هر ذره ز جرعه تو گل خیز \* هر قطره ز باده تو لبریز  
 در هر خم تار از تو سازی \* در هر دل مور از تو رازی  
 دوران بهزار جوش و غلغل \* ارشیشه تست نیم قلقل  
 آب و گل تن سرشته تو \* لوح دل در جان نوشته تو  
 عقلم بره تو نعل و اکلیل \* کنهت بقیال سنگ و تندیل  
 از هودج عزت شب تار \* پس مانده از بپای افکار  
 آخر همه را نهایت آخر \* با اول تو بدایت آخر  
 بیرون ز نشان رهنمونان \* بر تر و خیال ذو فنونان  
 مرغیکه بهرش دانه چیدد \* بر کنگر خامه کی نشیند  
 ای بردل و جان فزایش تو \* جز تو که کند ستایش تو  
 در راه تو سالکان هر اسان \* یک مشکل خود نذر آسان  
 در مهد رحم ازان مکه صاف \* خون خورد جنین دسائر ناف

2. Describe and discuss the special features of Fayḡī's Nal-Daman. Quote from memory, if you can, a few lines that you think to be the best in the work.

3. Determine the place of Fayḡī as a Mathnawī-writer, and compare him with any other Mathnawī-writer with whose works you are familiar.

4. (۱) توحید تو نامه بر نثابد -

(۲) دام که چه طرف بزد از آب -

(۳) ناخن چه زنم دگر برین راه -

(۴) چون سرمه فروش زخم کاری \*

(a) Comment on the idiomatic use of the underlined expressions, and explain them fully in simple Persian, making clear the sense.

(b) Explain fully in Persian *any three* of the following :—

- (i) ده عقل چراغ منظر او \* نه چراغ طراز منبر او  
قصر جبروت آشیانش \* بام ملکوت آستانش
- (ii) آمد شد او بملک بالا \* چون جزر و مد معیط والا  
ناگاه شد آنجهان انوار \* از صیت پر فرشته بیدار
- (iii) اسرار عقول و راز اجرام  
او خوانده ز عقل چون جم از جام  
نقش همه دیده در مقابل  
اسکندر از آئینه وی از دل
- (iv) عشقی بپذیر جاردانی \* کو ماند اگر تو خرد نمایی  
چون خود شودت به بزم ساقی \* بریش دهدت حیات باقی

4. Describe and discuss the character of 'Nal' and of 'Daman'. as depicted by Fayḡī in his Mathnawī.

(GROUP A—LITERATURE.)

#### SEVENTH PAPER.

Examiners— { PROF. M. Z. SIDDIQI, M.A. PH.D.  
SIR Z. R. ZAHID SUHRAWARDY, Kt., M.A., B.L.,  
BAR-AT-LAW.

*The questions are of equal value.*

Answer Question 8 and ANY TWO questions from Group A and  
THREE questions from Group B.

#### GROUP A.

1. Give in your own Persian the substance of the Maqama on old age and youth, and comment upon it.

2. Give the context and translate into English, adding notes where necessary :—

بدان خدای که سنگ بدخشان را رنگ و طراوت داد و در لعاب زنبور  
شفا و حلاوت نهاد، که هر که درین ترتیبات و ترکیبات سخن از عناصر گفت  
از عقل قاصر بود و هر که حواله این ابداع و اختراع بیپولی و علت اولی کرد

در راه دانش سقصر بود. بلکه جمله این ابداع و انشاء و اختراع و افشاء تعلّق بمکون اشیاء دارد، و خالق ما یشاء که طبع ازین خاصه بیگانه است و عقل درین آشیانه دیوانه - در هر یک جوهر استعداد خل و خمر و بر یک شاخ اجتماع خار و ثمر، بی ارادت زید و اختیار عمر دلیل است بر وجود آنکه که الخلق و الامر تبارک الله رب العلمین \*

3. Explain fully in your own Persian:—

باید دانستن که عشق را دو مقام است و محبت را دو کام، صوفیان را مقام مجاهدت است، و صافیان را مقام مشاهدت، عاشق صوفی همیشه در زیر بار است، و مرد صافی همیشه با یار - صوفی در رنج جگر همی خورد، و صافی از گنج بر همی برد، بعکم آنکه در عشق دوئی نبیند، و منی و توئی نداند، عشق با نفس همسان شود، و نفس با عاشق یکسان گردد، و عشق یک پیراهن و پوست گردد، و مرد با خود دشمن و دوست گردد، و نفس عاشق دعای معشوق گردد، و پوست محب و طای محبوب شود \*

GROUP B.

4. Describe 'God Deed' (نکوهی)، and illustrate it according to the author of the Shamsa wa Qahqaha.

5. Give the context, explain fully the following passage, and give the rest of the story, in your own Persian:—

یکی از عنذلیبان چمن رفاق در گلشن دلکشائی اتفاق به سرود ز بیابان این نکته روح افزا دستان سرا گردید، که وقتی از اوقات پیشین، یکی از پرورش یافتگان دارالنعیم امارت و بغتیاری و چهره پر مردان عرائس دولت و نامگذاری، که همواره از لگونة عدل و داد رخساره شاهد صدق نیت را آب و رنگ آسایش دادی و خازن گنج خانه خلق و خلیقش در خزانه مروت و انصاف بر چهره امید دلباشد، کشادی، روزی مانند مردمی دیده در صدر سریر حدیقه حکمرانی نشست بود، یکی از خدام بارگاه مروه در دست گرفته بر بالای سر او ایستاده، ویرا باد میزد \*

6. Translate into English with reference to the context and give the rest of the story:—

اگر نسیمی بی اجازتِ تهرمان اختیارش به گلزاری داخل گردیدی شعنان در دولت  
سرای، بنقش شمشیر تنبیه، پاء حرکتش را قطع نمودی، و اگر بعر، از  
دیده حباب، بزررقی خیره نگرستی ملاحان دریای حفظش از نوک سنای موج  
چشمش را در آوردندی - در آن روز چون وزیر اعظم رای فیافتش از نگارش  
ارقام دیوان عدل و داد باز پرداخته، خوان سالاران سفره ناز و نعیم مانند بساط  
سپهر گسترند، قابهائی مطعمه الوان را چون کراکب درخشان جا بجا ترتیب  
داند، شهر هر لقمه که ازان اطعمه تناول مینمود، ناگواری طبع لطیفش افتاده  
بهر طعامی دست رسانیدی، شبه بغاطرش میرسید، و مطلقا احساس طعم لقمه  
و لذتی نمینمود \*

7. Explain fully the following expressions:—

(۱) گرگ نفس اماره - (۲) مرگ عالم لاریبی -

(۳) قیض لذتی - (۴) شہسوار مضار دانائی -

(۵) بدیہی - (۶) مہرہ مانند کعبتین -

(۷) قاندان زنادر گرم - (۸) شوارہ اقوال -

(۹) دستان غاری - (۱۰) قضای مبہم \*

8. Give the literary merits and demerits of the *Shamsa wa Qahqaha*, and compare it with some of the well-known works in Persian on the main subject of your text book, as regards style and method of treatment.

## (GROUP A.)

## EIGHTH PAPER.

Examiners— { MAULVI M. MAHFUZ-UL HAQ, M.A.  
 PROF. MOHD. NIZAMUDDIN, PH.D.

*The questions are of equal value.*

*Attempt only FIVE questions, of which Question 4 is compulsory.*

1. Estimate the position of Nāṣir-i-Khusraw among the writers of classical prose.
2. Give an outline of the *Rôle* of Nāṣir-i-Khusraw as an Ismā'īlī propagandist.
3. Give a short description of Cairo as seen by Nāṣir-i-Khusraw.
4. Give the context and translate into English:—

(a) طاقی سنگین دیدم چنانکه راه بمیان آن طاق بیرن میرفت بالای آن طاق  
 پنجاه گز تقدیر کردم و از جوانب او تخته سنگهای سفید برآورده چنانکه هر  
 سنگی از آن زیادت از هزار من بود، و این بنا را از خشت بمقدار بیست گز بر آورده  
 اند و بر سر آن اسطوانهای رخام برپا کرده، هر یکی هشت گز وسطبری چنانکه  
 بعهده در آغوش دو مرد گنجد، و بر سر این ستونها طاقها زده است بدو جانب همه از  
 سنگ منهدم چنانکه هیچ گچ و گل در این میان نیست و بعد از آن طاقی عظیم بر  
 بالای آن طاقها بمیان راست ساخته اند بدیالای پنجاه ارش، و هر تخته سنگی را که در آن  
 طاق بر نهاده است هر یکی را هشت ارش قیاس کردم در طول و در عرض چهار ارش که  
 هر یک از آن تخمیناً هفت هزار من باشد، و این همه سنگها را کنده کاری و نقاشی خوب  
 کرده چنانکه در چوب بدان نیکوئی کم کنند، و جز این طاقی بقاء دیگر نمانده است \*

(b) مجموع ولایات گیلان خاصه بلده لاهیجان در سبزی و خرمی و معموری و  
 وفور گل و لاله و کثرت میاه و انهار و تشاب و اشجار و اثمار گرم سیری و سرد سیری در  
 ربع مسکون بی عدیل و نظیر است، و البیت جدا که مشابه آن یافته نشود، شهرهای  
 معتبره معموره و عمارات عالیّه مزینّه و قلاع متینّه دارد، و از قدیم الایام باز همیشه  
 معمور و مسکن سلاطین ذی شوکت بوده، اغلب درمیان سه پادشاه صاحب دستگاه انقسام  
 داشته، هوائی در غایت رطوبت و اعتدال دارد، و حسن معیشت و تنعم خلقتش بدرجه  
 کمال، و از اکثر ممالک عالم ممتاز است، در جمیع ماکولات و اقسام ملبوسات و اصناف  
 ضروریات آن ملک راهیچ گونه حاجت بغارچ نیست، و آنچه در اکثر ممالک حاصل  
 و مهیا نتراند شد آنجا میسر و سهل الحصول و بقدر و بها است \*

5. Give a short account of the city of Isfahān in the days of 'Alī Ḥazīn.

6. What peculiarities of Ḥazīn's poetry one can glean from his autobiography?

- 7, بیان کنید احوال برخی از اساتید کرام شیخ علی حزین در زبان فارسی \*
- 8 شرح دهید ذکر معدودی از افاضل معاصرین ناصر خسرو در زبان فارسی \*

(GROUP D)

FIFTH PAPER.

Examiners— { MAULVI MD. ISHAQUE, M.A., B.Sc.  
DR. M. B. RAHMAN, M.A., PH. D.

*The questions are of equal value.*

*Answer THREE questions from each group. Question 1 in each group MUST be answered.*

GROUP A

1. Translate into English, making clear the sense:—

موضع کفر نیست جز در رنج  
مرجع شکر نیست جز سر گنج  
گوی از پی زیادت را  
عالم الغیب و الشهادات را  
چون شدی بر قضای وی صابر  
خواند آنگاه مرا ترا شاکر  
آدمی سوی حق همتی پیوید  
او نگوید که شکر حق گوید  
شکر شکر او که بپذیرفت  
گوهر ذکر او که داند  
او بجوشد هم او تواب دهد  
او بگوید هم او جواب دهد  
هر چه بستند ز نعمت و نازت  
به ازان یا همان دهد بازت  
گر همه مویها زبان کردند  
بر در شکر ترجمان کردند



تا بدان شکر از فزون گویند  
 شکر تو فیق شکر چون گویند  
 پس سوی شکر نعمتش پیوند  
 گر بگویند هم بدو گویند  
 تن و جان از پی قضا در سکر  
 دل توئم کنان که یا رب شکر  
 ورنه در راه دانش و تدبیر  
 از زن و مرد و ز جوان و ز پیر  
 کور چشمان عالم هوس اند  
 عور جسمان چو مور و چون مگس اند

2. Explain fully in Persian:—

هر که خواهد ولایت تجرید	و آنکه جوید رعایت تفرید
از درونش نباید آسایش	وز برونش نشاید آرایش
آن ستایش که از نمایش اوست	ترک آرایش و ستایش اوست
بر در شه گدای نان خواهد	باز عاشق غذای جان خواهد
در طریقت مجرّد و چالاک	داده برباد آب و آتش و خاک
زانکه در عرصه معالم عصر	چه برش جاهلان چه عالم قصر
ای برادر بر آذر تجرید	جگر خود کباب دان نه ثرید

3. Do you agree that Sanai is the first exponent of mysticism in Persian poetry? Support your answer with arguments.

4. Briefly sum up Sanai's ideas about dreams and their interpretation.

GROUP B.

1. Explain in Persian with necessary annotations:—

طیبات از بهر که لطیفین  
 یار را برکش برنجان و بجین  
 یی مثال ای دل پی فرقی بیار  
 تا بدانی جبر را از اختیار  
 دست کآن لرزان بود از ارتعاش  
 و آنک دستی را تو لرزانی ز جاش

هر دور جنبش آفریده حق شناس  
 لیک نتوان کرد این با آن قیاس  
 زین پشیمانی که برزائیدیش  
 چون پشیمان نیست مرد مرتعش  
 بعث عقلست این چه بعث ای حیلہ گر  
 تا ضعیفی ره برد آتجا مگر  
 بعث عقلی گر در و مرجان بود  
 آن دگر باشد که بعث جان بود  
 بعث جان اندر مقامی دیگر است  
 بادۀ جان را قوامی دیگر است

2. Translate faithfully into English :-

همچو شه نادان و غافل بد وزیر  
 پنجه می زد با قدیم ناگزیر  
 با چنان قادر خدای کز عدم  
 صد چو عالم هست گرداند بدم  
 صد چو عالم در نظر پیدا کند  
 چون که چشمت را ز خود بینا کند  
 گر جهان پیشت بزرگ و بی بنیست  
 پیش قدرت ذرّه میدان که نیست  
 این جهان خود جس جانهای شماس  
 هین روید آن سر که صغری شماس  
 این جهان معدود و آن خود بی حد است  
 نقش و صورت پیش آن معنی سداست  
 صد هزاران نیـزّه فرعون را  
 در شکست از موسی با یک عصا  
 صد هزاران طبّ جالینوس بود  
 پیش عیسی و دمش افسوس بود  
 صد هزاران دفتر اشعار بود  
 پیش حرف امّی اش مار بود

با چنیس غالب خداوندی کسی  
چون نمیرد گر نباشد از خسی

3. Rewrite in Persian the story of the greengrocer and the parrot (بقال و طوطی), pointing out the mystic idea contained in it.

4. Write a short essay on 'Mathnawi of Rumi as a guide in practical life'.

(GROUP D.)

### SIXTH PAPER

Examiners— } MR. L. BAGDANOV.  
                  } MR. A. GHANI, M.A., M.LIT.

*The figures in the margin indicate full marks.*

1. (a) Explain in simple Persian, adding critical remarks:— 30

(الف) بدانکه هر که خشم با اختیار و دیانت فر و خورد مبارک آید اما اگر از عجز و ضرورت فر و خورد در اندرون گرد آید و مایه کبر و حق دگر دد پس حق در فرزند خشم است و ازان هشت کواده پید آید \*

(ب) بدانکه بیشترین خلق معجوب اند بسبب غفلت معجوب اند و همانا از مد نود و نه این باشد و معنی غفلت آنست که از خطر کار آخرت خبر ندارد و گر نه تقصیر نکردندی چه آدمی را چنان آفریده اند که چون خطر بیند حذر کند لکن این خطر بذور نبوت توان دید یا بمانای نبوت که بدیگران رسد \*

(ج) آداب عطاستدان آنست که هرچه از شه بود نستاند و هرچه از حاجت زیادت بود نستاند مگر که بغدومت درویشان مشغول بود پس اگر برملا بستاند و در سر بدهد این درجه صدیقان است و اگر طاقت این ندارد خود نستاند تا خداوند بمستحق رساند \*

(b) Write notes on the underlined expressions.

2. Discuss the value of the کیمیای سعادت as a moral and ethical work. What is the author's message to the Islamic world? 14

Or,

Give an appreciation of the greatness of al-Ghazālī as a Sūfī. What is the philosophy of life according to his point of view?

3. Give the full name of the author, date and place of composition, and the principal feature of the المعجرب. Why was it written? 14

4. Translate into English, and explain the underlined words and phrases in simple Persian:— 14

اما سبب اول آنست که کمال خود اعتقاد کنی بقول کسی باید که اندیشه کنی که اگر این صفت که او می گوید چون علم و ورع راست است شادی تو باین صفت باید که بود بآن خدائیکه ترا این داد نه بقول او چه بقول کسی این زیادت و کم نشود و اگر ثنا بر بتوانگری و خواجگی و اسباب دنیا گوید این خود بشادی نیرزد و اگر ارزد شاد بآن باید بود نه بدمع بلکه عالم نیز اگرچه علم و ورع خود داند بشادی نپردازد از بیم خاتمت که آن معلوم نیست و تا آن معلوم نشود همه ضایع بود \*

5. Mention three important European writers on Persian mysticism, and discuss their contribution to the study of the subject. 14

6. Translate into English any one of the following passages, and point out the peculiarities in spelling:— 14

### A

و اندر حکایات یافتیم کی اعرابی از بادیه در آمد و او بر در سراری خود نشسته بود اندر کوفه عرابی ویرا دشنام داد و مادر و پدرش را وی برخاست و گفت یا اعرابی اگر کرسنه تا نانت آرند و یا تشنه تا آبت آرند یا ترا چه رسیده است و وی میگفت تو چنین و مادرت و پدرت چنین و چنین. من رضی الله عنه فرمود غلام را تا یک بدره دینار بیرون آورد و گفت یا اعرابی معذور دار کی اندر خانه ما بیش ازین نمانده ست و الا از تو دریغ نداریم چون اعرابی این سخن بشنید گفت اشد انک ابن رسول الله صلی الله و سلم می گواهی دهم کی تو پسر پیغمبری و من اینجا بتجربت حلم تو آمدم و این صفت محققان مشایخ باشد رضوان الله علیهم کی مدح و ثن خلائق بنزدیکی ایشان یکسان شده باشد و بجفا گفتن متغیر نشوند و الله اعلم \*

### B

چون درویشی سفر اختیار کند بدون اقامت شرط ادب وی آن بود که نخست باری سفر از برای خدای تعالی کند نه بمتابعت هوا و چنانی بظاهر

سفری میکند بباطن از هواها خود نیز سفر کند و مدام بر طهارت باشد و  
 ثورات خود ضایع نکند و باید تا بدان سفر مرادش یا جعی باشد عزوی یا  
 زیارت مریضی یا گرفتن فائده و طلب علمی یا رؤیت شیخی از مشایخ و الا  
 مضطرب باشد اندران سفر و ویرا اندران سفر از مرقعه و سجاده و عصائی و  
 رکه و حبلی و کفشی یا نعلینی چاره نباشد تا بمرقعه عورت پیوسته و بر  
 سجاده نماز کند و بر رکه طهارت کند و بعضا آنها از خود دفع کند و اندران  
 ویرا مآرب دیگر بود و کفش اندر حال طهارت در پای کند تا بسر سجاده آید  
 و اگر کسی آلت بیشتر ازین دارد مر حفظ سنت را چون شانه و سوزن و ناخن پیری  
 و مکمل را باشد \*

((GROUP D.))

#### SEVENTH PAPER.

Examiners— ( MAULVI SHAH KALIMUR RAHMAN, M.A.  
 ( PROF. MOHD. NIZAMUDDIN, Ph.D.

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Discuss : 'The devout life within the Muslim Church led to a more complete pantheism than ever did the Christian trinity'.

2. Explain : 'The quietism and pantheistic self-abandonment, on which these definitions lay so much stress, forms only the negative side of Abú Sá'id's mystical teaching. His doctrine of *faná*, the passing away from self, is supplemented by an equally characteristic positive element'.

3. Describe fully the real contribution of Shaykh 'Abdu'l-Qádir Jílání to Sūfī'ism.

4. Give a brief account of the mystical interpretation of Islam according to Jílí.

5. How the idea of a 'Perfect Man' originated in Sūfī'ism, and who are its greatest exponents?

6. Give a short account of 'المربى المعنوى', according to Shaykh 'Abdu'l-i-Qádir Jílání.

7. Differentiate between رحة الوجد and رحة الشهود, at what stage 'Alf becomes One'.

8. Explain *any eight* of the following terms:—

سير الى الله - سير في الله - نفس - معجز - اعيان ثابتة -  
حضرة الشهادة - غراب البين - لطائف سته - الانسان الكامل - قبض \*

9. What is the true character of a Sūfī'ism? Discuss this subject, quoting authorities in support of your answer.

(GROUP D.)

### EIGHTH PAPER.

Examiners- { MAULVI M. MAHFUZ-UL HAQ, M.A.  
DR. HADI HASAN, M.A., PH.D.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Give some definitions of Sūfism, and mention the most important Persian prose-works on the subject.

2. Give in Persian a short biography of *any one* saint mentioned by Farīduddīn Aṭṭār.

3. Describe the development of Islamic mysticism. How far has it been influenced by the non-Islamic systems of mysticism?

4. Give a short account of the introduction and progress of Sūfism in India.

5. Mention the sources of the *Nafahat-ul-Uns*, and discuss its value as a biography of saints.

6. Describe and discuss fully the services of *either* Aṭṭār *or* Jāmī to Islamic mysticism.

7. Give an account of the important Sūfī 'orders' with names of their founders and their beliefs.

8. Give an account of the rise and progress of the Qādirī *or* of the Naqshbandī order.

9. Write critical notes on *any four* of the following:—

خزينة الاسفيا - رشحات عين العبيات - اصعاب مقله - سير العارفين - تذكرة الاوليا -  
اشعة اللمعات - مغدوم الملك بهارى

## INDIAN VERNACULARS

## BENGALI

## FIRST PAPER.

*The questions are of equal value.*

## FIRST HALF.

*Examiner*—DR. D. C. SEN, RAI BAHADUR, B.A., D.LITT.

1. (a) Give an account of the activities of early Bengali poets of the Ram-cult, noting the peculiar features and excellences of some of the most prominent of them.

*Or,*

(b) Give a detailed account of the life and works of two of the most distinguished writers of Manasa Mangal poems, showing their poetical merits and the bearing which contemporary social and political environments had on them.

2. (a) Show the excellence of Bengali folk-poetry, and account for the similarity of some of the Bengali tales with those prevalent in Europe in the mediæval age—collected by Grimm Brothers.

*Or,*

(b) Compare the Vaisnava standard of love with that of the Eastern Bengal Ballads, showing their contrasts and points of agreement.

3. (a) Estimate the literary value of Dr. Carey's works in the field of Bengali prose, and of the Mohammedan writer whom you consider to have made the best contribution to Bengali literature.

*Or,*

(b) Discuss the value of the remark that the earliest writers of Bengali mostly hailed from North and East Bengal, and that the achievements of Western Bengal in the field of Bengali literature are, with a few exceptions, comparatively modern.

## SECOND HALF.

*Examiner*—PROF K. N. MITTER, RAI BAHADUR, M.A.

*Answer ANY THREE questions.*

1. Discuss the five well known *Rasas* in Vaishnava poetry, giving examples of each from the Padavali.

2. Explain the mystic element in the Vaishnava conception of love, and illustrate your answer by quotations from Chandidasa's Padavali.

3. Give an account of the life and works of (i) Vidyapati, and (ii) Krishnadas Kaviraj.

4. Examine critically the claims of Govinda Das's Karcha to be regarded as an authentic account of Chaitanya's travels.

5. Write short notes on :—

Bhav-sammilan, Bhaktiratnakar, Uttar gostha, Mahabhav, Ray Ramananda, Bir Hambir.

## SECOND PAPER.

Examiner.—MR. M. M. BASU, M.A.

The figures in the margin indicate full marks.

## FIRST HALF.

Answer Questions 1 and 2 and ANY ONE of the rest.

1. Explain fully the following:—

16

- (a) চিঅ সহজে শূণ সংপূৰ্ণ  
 কাঙ্ক্ষবিয়েএ মা হোহি-বিসন্ন ॥  
 মুঢ়া দিঠ নাঠ দেখি কাঅর  
 ভাগতরঙ্গ কি সোষই সাঅর ॥  
 মুঢ়া অচ্ছন্তে লোঅ ন পেথই  
 দুধ মাঝে লড় গচ্ছন্তে দেখই ॥  
 ভব জাই গ আবই এস কোই  
 আইস ভাবে বিলসই কাঙ্ক্ষি জোই ॥

Or,

- (b) পহিলে তোড়িআ বড়িআ মরাড়িইউ  
 গঅবরে তোলািআ পাঙ্কজনা ঘোলাউ ॥  
 মতিএ ঠাকুরক পরিণিবিস্তা  
 অবশ করিআ ভববল জিতা ॥

and

- (c) তু লো ডোষী হাউ কপালী  
 তোহোর অন্তরে মোএ ঘলিলি হাডেরি মালী ॥  
 সরবর ভাঞ্জীঅ ডোষী খাঅ মোলাগ  
 মারমি ডোষী লেমি পরাগ ॥

2. Explain fully with reference to the context:—

16

- (a) ময়ূর-পুচ্ছে বান্ধি চুড়া . কেশপাশে দিআ বেড়া  
 কনয়্য কুম্বে বান্ধী জটা ।  
 দেহ নীল মেঘছটা . গন্ধ চন্দনের ফোটা  
 ঘেন উয়ে গগনে চান্দ গোটা ॥



চন্দন চচ্চিত গাএ      ঘাঘর মগর পাএ  
 হেন বেশ হেন দরশনে ।  
 নেত পরিধান লাদী      হাথে মোহারী ঝাশী  
 সে কৃষ্ণ গেলাস্ত গগনে ॥

and

(b)      হরেথ স্থপুট নালা নয়ন কমল ।  
 কামাণ সদৃশ শোভে জ্বলি যুগল ।  
 ভুজযুগ করিকর জাহত লুলে ।  
 করদকবিন্দ মাল নিম্নিত কমলে ॥

Or,

(c)      জ্বলি চুন-রেখ য়েহ দেখি ।  
 কোটর বাটুল ছুই আখি ।  
 মাছাপুট নাশা দণ্ডহীনে ।  
 উন্নত গণ্ড কপোল খীনে ॥

3. What have you to say in justification of the statement that Śrīkṛṣṇa-kīrtana is a work of the pre-Caitanya period ? 18

4. Compare the language of the Cāryyās with that of the Śrīkṛṣṇa-kīrtana. 18

5. What idea have you formed about the doctrine preached in the Cāryyās ? 18

## SECOND HALF.

Answer Questions 1 and 5 and ANY ONE of the rest.

1. Explain fully :—

12

(a) হে কালিন্দিজল, বার ভাই বার আদিত্ত, হস্ত পাতি লহ সেবকর  
 অর্থ পুণ্ড্র পানি ; সেবক হব স্থখি, আমনি ধামাংকরি গুরু পণ্ডিত দেউল্যা  
 দানপতি সাংস্বরভোক্তা সন্ন্যাসি গতি জাইতি গাএন বাএন ছুআরি ছুআরপাল  
 কোমি কোটাল পাব মোখ মুকতি, এহি দেউলে পড়িব জন্ম জন্মকার, দাতা  
 দানপতির বিয় হব নাশ ।

- (b) এহি সব এড়ি জাবে আপনে জানিয়া ।  
 নএয়ানগর এড়ি জাবে উনশত বেনিয়া ।  
 বাপের মিরাম এড়ি জাইমু গৌড়র সহর ।  
 দাদার মিরাম এড়ি জাবে কামলাক নগর ।  
 তুমি মাএর জত বাড়ি কলিকানগর ।  
 আমি বাড়ি বান্ধিয়াছি মেহারকুলসহর ।  
 চল্লিশ রাজাএ কর দেএ আমার গোচর ।  
 আমা হোতে কোনজন আছএ ভান্ধর ।  
 সাজ সাজ করি রাজা দিল এক ডাক ।  
 এক ডাকে সাজি আইল বাসৈস্তর লাথ ।

2. How has the theory of Creation been treated in the *Sūnya-Purāṇa* ?  
 Discuss the question of the probable source of the idea and its influence in  
 later works. 13

3. Estimate the value of *Caitanya-Caritāmṛta* as an important work of  
 the post-Caitanya period. 13

4. Write notes on Gopicanḍrer Pañcālī under the following heads :  
 (a) peculiarities of religious beliefs underlying the narration of the poem,  
 (b) the time of composition of the Ballad you have read, (c) historical  
 basis of the story.

5. Explain any two of the following, adding notes wherever  
 necessary :— 25

- (a) অদ্বৈত-চিত্ত-তরুণর ফরাউ তিহঅণে বিখার ।  
 করুণা ফুল্লিঅ ফল ধরই গামে পরউআর ॥

\* \* \* \* \*

পণ্ডিঅ সঅল সখ বক্খানই ।  
 দেহহি বুদ্ধ বসন্ত গ জাগই ॥  
 অমণাগমণ গ তেন বিখণ্ডিঅ ।  
 তোবি গিলজ্জই ভণই হউ পণ্ডিঅ ॥

\* \* \* \* \*

ভাবাভাবে জো পর হীনো ।  
 তহি জগ সঅলাসেসবিলীনো ॥

(b) আউ থাকিতে কাহাঞি মরণ ইচ্ছসি ।  
 সাপের মুখেতে কেহু আঙ্গুল দেসী ॥  
 চুন বিহনে ঘেহু আঙ্গুল তিতা ।  
 আলপ বএসে তেহু বিরহের চিন্তা ॥  
 লাজ নাহি কাহাঞি বদনে তোহোর ।  
 পাশে আসিতে কেহু চাহসি মোর ॥  
 মজুরিআ হইয়া কেহু এত বড় রত্ন ।  
 অলপ হইয়া চাহ বড়ার সত্ত্ব ॥  
 মাকড়ের হাতে ঘেহু ঝুনা নারিকেল ।  
 আশ্বাক দেখিআ তেহু না হই বিকল ॥

(c) ব্রহ্ম হৈতে জন্মে বিশ্ব, ব্রহ্মেতে জীবয় ।  
 সেই ব্রহ্ম পুনরপি হয়ে যায় লয় ॥  
 অপাদান-করণাধিকরণ—কারক তিন ।  
 ভগবানের সবিশেষ এই তিন চিহ্ন ॥  
 সং-চিৎ-আনন্দময় ঈশ্বরস্বরূপ ।  
 তিন-অংশে চিহ্নিত হয় তিন রূপ ॥  
 আনন্দাংশে হলাদিনী, সদংশে সন্ধিনী ।  
 চিদংশে সংবিৎ—যারে “জ্ঞান” করি মানি ॥  
 অন্তরঙ্গ চিহ্নিত, তটস্থা জীবশক্তি ।  
 বহিরঙ্গা মায়া—তিনে করে প্রেমভক্তি ॥

### THIRD PAPER.

*The figures in the margin indicate full marks.*

#### FIRST HALF.

*Examiner--DR. T. C. DASGUPTA, M.A., Ph.D.*

1. Attempt one question from each group :—

26

#### A.

- (i) Discuss the nature of Kavikankan Mukundaram's humour.
- (ii) What light do the *Chandikavyas* throw on mediæval Bengali culture?

## B.

- (i) Discuss the element of *pathos* in the *Mymensingh Ballads*.  
 (ii) Give an estimate of *Mymensingh Ballads* as pictures of Bengali rural life.

2. Explain, with reference to the context, *any four* of the following passages, clearing allusions and figures of speech where necessary :— 16

(a) বহু গরিবার মেলা দুই নারী চারি শালা

চারি পুত্র বহিনী সাহুড়ী ।

ছি জাঙাঞো দশ চেড়ি য়েই হেতু সাত বাড়ী

ধাত্ত দিবে নাহি দিবে বাড়ি ॥

(b) পিতা হৈয়া দোহাকার রাখি জাহ প্রাণ ।

দিয়া কুলিতার ধন তিন গোটা রাণ ॥

বিচারিয়া দেখ অপরাধ নাহি করি ।

নিজ ধন দিয়া বীর বশাইলা পুরী ॥

(c) আমি যদি হইতাম কুড়া থাকতাম তার সনে ।

তার সঙ্গে থাক্য আমি ঘুরতাম বনে বনে ॥

আসমানে থাকিয়া দেওয়া ডাকছ তুমি কারে ।

ঐনা আষাঢ়ের পানী বইছে শতধারে ॥

(d) দেখিতে সুন্দর নাগর চান্দ্রের সমান ।

চেউয়ের উপর ভাসে যেন পুন্ন মাসীর চান ॥

আখিতে পলক নাহি মুখে নাই সে বাণী ।

পারেতে খাড়াইয়া দেখে উমেদা কামিনী ।

(e) পিতামহ ছিল মোর রাম-সেনাপতি ।

সাগর লংঘিতে হৈলা গগনে পদাতি ॥

কি মোর দারুণ বিধি লিখিলা কপালে ।

শাত পুত্র বীর মোর বান্ধে ঘোড়াশালে ॥

(f) মাও ছাড়ছি বাপ ছাড়ছি ছাড়ছি জাতি কুল ।

ভরম হইলাম আমি তুমি বনের ফুল ॥

তোমার লাগিয়া কত্যা ফিরি দেশ বিদেশে ।

তোমারে ছাড়িয়া কত্যা আর না ঘাইবাম দেশে ॥

8. *Either,*

Attempt a study of the character of *Bhānu Datta*, illustrating your answer with quotations from the text. 8

Or,

Give a critical appreciation of *Chandrāvatī*.

### SECOND HALF.

*Examiner*—MR. BISWAPATI CHAUDHURI, M.A.

1. Discuss one of the following :— 15

(a) Bankimchandra's art in portraying *Kapālakundalā* as 'a child of Nature, out of place in human environment'.

(b) The basic conception of the *Raivata* as an epic.

(c) The play of *Rasas* in Girishchandra's *Janā*.

2. Attempt one of the following :— 15

(a) Rabindranath's ideology as reflected in the poems in *Saṁcayitā*. Select a few typical poems as illustrations.

(b) An analysis of appropriate *Virāṅganā*-epistles, showing how far the original characters lose or gain by Madhusudan's infusion of new ideas into them.

(c) The *Janā* of Girishchandra and of Madhusudan—a comparison and contrast.

3. Explain, with reference to the context clearing allusions and figures of speech where necessary, two passages from Group A and two from Group B :— 20

### GROUP A.

(a) আত্মোপকারীকে বনবাসে বিসর্জন করা যাহাদের প্রকৃতি, তাহারা চিরকাল আত্মোপকারীকে বনবাস দিবে। কিন্তু যতবার বনবাসিত করুক না কেন, পরের কাষ্ঠাহরণ যাহার স্বভাব, সে পুনর্বার পরের কাষ্ঠাহরণে যাইবে।

(b) বিচিত্র হৃদয়যন্ত্রের তত্ত্বীচয় সময়ে সময়ে একরূপ লয়হীন হইয়া থাকে যে, যত যত্ন করা যায়, কিছুতেই পরস্পর মিলিত হয় না,—কিন্তু একটি শব্দে, একটি রমণীকণ্ঠ-সম্ভূত স্বরে সংশোধিত হইয়া যায়।

(c) অন্তরের জিনিষকে বাহিরের, ভাবের জিনিষকে ভাষার, নিজের জিনিষকে বিশ্বমানবের এবং ক্ষণকালের জিনিষকে চিরকালের করিয়া তোলা সাহিত্যের কাজ।

(d) পূর্ণতালাভের প্রতিই লক্ষ্য রাখিয়া সংঘমচর্চাকেও যদি ঠিকমত সংঘত করিয়া রাখিতে পারি, তবে মনুষ্যের কোনো উপাদানই আঘাত পায় না, বরঞ্চ পরিপুষ্ট হইয়া উঠে।

## GROUP B.

(a) আইস গরুড়-ধ্বজে, পাঞ্চজন্ম নাদি,  
গদাধর ! রূপ-গুণ থাকিত যতপি  
এ দাসীর, কহিতাম—“আইস মুরারি !  
আইস ; বাহন তব বৈনতেয় যথা  
হরিল অমৃতরস পশি চন্দ্রলোকে,  
হর অভাগীরে তুমি প্রবেশি এ দেশে ।”

(b) —————যে অনন্ত জ্ঞানে  
সৃষ্ট ও চালিত এই বিশ্ব চরাচর,  
পড়েছে সে জ্ঞানছায়া হৃদয়ে বাহ্যর,  
ছাড়ি সে অনন্ত জ্ঞান, অনন্ত শক্তি,  
সে কেন পুজিবে অন্ধ জড় প্রভাকর ?  
ক্ষুদ্র বালুকণা, আর প্রচণ্ড তপন,  
এই মহাসিদ্ধি, আর এই বহুধরা ।

(c) দূরে—দূরে—  
দিক-অন্তে নিশার আলয় যথা,  
যথা, একাকার প্রলয় হুকার  
উঠিতেছে রহি রহি,  
নাহি যথা সৃষ্টির অঙ্কুর,  
দৃষ্টিহীন দিবাকর !  
যথা নিবিড় আধারে  
ঘোর রোলে পরমাণু ঘূর্ণ্যমান,  
যথা জড়জড়িমায় প্রকৃতি জড়িত—  
ঘোর ধূমমাকৈ,  
চলে প্রলয়-জীমূতশ্রেণী,  
বজ্র-অগ্নিধারা ঝরে,  
যথা, ঘোর হাহাকার, পিনাক-টকার ;  
করি স্থান পান, শূল করে মহাক্রন্দ ধার,

যথা,

আভাহীন বহি জলে ঈশানের ভালে

প্রলয় বিবাণ নামে,—

দূরে—দূরে—চল য়রা ।

(d) যে মুহূর্ত্তে পূর্ণ তুমি সে মুহূর্ত্তে কিছু তব নাই ;

তুমি তাই পবিত্র সনাই ।

তোমার চরণস্পর্শে বিশ্বধূলি

মলিনতা যায় ভুলি' ।

পলকে পলকে

মৃত্যু ওঠে প্রাণ হয়ে বলকে বলকে ।

যদি তুমি মুহূর্ত্তের তরে

ক্লাস্তি ভরে

দাঁড়াও থমকি',

তখন চমকি'

উচ্ছিয়া উঠিবে বিশ্ব পুঞ্জ পুঞ্জ বস্তুর পর্ত্তে ।

#### FOURTH PAPER.

*The questions are of equal value.*

##### FIRST HALF.

*Examiner*—MR. P. R. SEN, M.A.

Write an essay on *one* of the following topics:—

50

(a) Modern Bengali Epics under Western influence.

(b) Western influence in Bankimchandra's historical novels.

(c) Nature in Rabindranath's early poetry and Western influence.

##### SECOND HALF.

*Examiner*—DR. D. C. SEN, RAI BAHADUR, B.A., D.LITT.

*Attempt only ONE question ; answer to be written in Bengali and in the form of an essay.*

1. Show that the angularities to be found in the Early Bengali Prose writings, influenced by the Sanskrit Pundits, the Maulvies, and the European writers, gradually passed away after the abolition of the Fort William College and that the prose of the Vidyasagar shows a landmark of sober classical style which has not yet been surpassed.

2. Is it true that many expressions and idioms of Akshoy Datta's prose so far as his scientific treatises are concerned have grown obsolete? Estimate the value of his literary style.

3. What justification is there to call Raja Rammohan Roy 'the father of Bengali prose'? How far is he indebted to the indigenous prose style extant in the country in his time, and what were the innovations he tried to introduce?

## HINDI.

### FIRST PAPER.

*The questions are of equal value.*

#### FIRST HALF.

*Examiner—MR. LALTAPRASAD SEKUL, M.A.*

*Attempt ANY THREE of the following questions.*

1. Discuss the standard of poetic excellence as enunciated by various critics, and from that standpoint discuss the merits of Bhushan and Keshava Dass particularly as narrative poets.

2. How does Tulsidās bring about a happy blending of the two paths ज्ञान and भक्ति, and how does he reconcile सगुणीपासना and निर्गुणोपासना?

3. Trace the history of the Romantic School of Hindi poetry, pointing out the causes of its unpopularity and ultimate disappearance.

4. What are the characteristics of the Sant literature, and how far are these due to the political and social changes of the period?

5. Show your acquaintance with any four of the following:—

Baba Benimadhava Dass; Ālamkeli; Jagatvinode Nuvakchandā; Bhaktamal; Akhavāwat; Goratadal ki Kathā; Mrigawati and Dhrwevadās.

#### SECOND HALF.

*Examiner—MR. NALINIMOHAN SANYAL, M.A.*

*Answer ANY THREE of the following questions.*

1. Give a detailed account of the growth of the *Bhakti* cult in India, showing how it originated in the south and gradually advanced northwards till it overran the whole of Northern India.

2. What is Mysticism? Show that Sūfism is a kind of Mysticism. Compare ancient Indian Mysticism with Sūfism. Did Sūfism have any influence on Hindi literature? Trace Sūfi ideas in Kabir with quotations.

3. Enumerate the Hindi poets that dealt with अमरजीत. Compare the treatment of the subject by Sūrdās and Nanddās, quoting freely from the two poets. Which of them has been able to carry greater conviction to Uddhav?

4. What was the secret of success of Tulsidās's *Rāmcharitmānas*? What can you say about the qualities of his other poems? Did contemporary poets have any influence on Tulsidās as regards subject matter, language, diction, form, and metre?



## SECOND PAPER

## FIRST HALF

Examiner—PT. SAKALNARAYAN SARMA.

*The figures in the margin indicate full marks.*

1. (a) गगनमंडल के बीच में अहां सीढ़ंगम डोरि ।  
 सबद अनाहद हीत है सुरत खगी तह मोरि ॥ १ ॥  
 कबीर नौबत आपनी दिनदस लिह बजाय ।  
 यह पुर पदन यह गली बहुरि न देखी आय ॥ २ ॥
- (b) सोब्रन थाल मोती भराय  
 भलहल करत दीपक जराय ।  
 संगह सखीय लिय सहस बाल  
 रुक गिति जेम मञ्जन मराल ॥ ३ ॥  
 तिन पञ्चरं पीठ हर जीत सां,  
 फिरंगी कती पास एक लात लाल ॥ ४ ॥
- (c) सुनत स्याम को नाम ग्राम गृह की सुधि भूली ।  
 भरि आनंद रस हृदय प्रेम बेली दुम फूली ॥ ५ ॥
- (d) सुनत सखा के बेन नैन भरि आये दीऊ ।  
 विवस प्रेम आवेस रहै नाहि सुधि कीऊ ॥ ६ ॥  
 गांव न जानौ गांव का विन जाने कित जांव ।  
 चलना चलना जुग भया पाव कोस पर गांव ॥ ७ ॥

उपर्युक्त पद्यां में किन्हीं तीन पद्यां के अर्थ अलङ्कार और प्रकरण के साथ लिखी । 15

2. (a) राखी में कौन रस प्रधान है । उसमें मुख्य रूप कौन गुण तथा रीति हैं ।  
 अपने पठित ग्रन्थों से वीर, रौद्र तथा वीभत्स का भेद उदाहरण के द्वारा बतलाओ । 8

(b) सीढ़ंगम, सुरत, सोब्रन, पञ्चरं, फिरंगी इन शब्दों के धौगिक अर्थ प्रकटित करो ।  
 अनाहद शब्द का क्या तात्पर्य है ? 4

3. भूषण और चंदबरदायी में कौन वीररस के अधिक जांचे कवि थे । उनके पद्यां में धनि और लक्ष्य का सौन्दर्य तुलनात्मक दृष्टि से अभिव्यक्त करो । 8

4. सनवाणी संग्रह के पाठ्य अंश के अनुसार आत्मा और परमात्मा के सम्बन्ध पर एक निबन्ध संक्षेप में लिखी । 10

5. चंद्रबरदायी के नाम से जो पृथ्वीराज-राखी प्रकाशित है। यह असली नहीं है। यह बात कुछ लोग कहते हैं। इस पर गवेषणापूर्वक विचार करो। 5-

## SECOND HALF

Examiner—PT. AMBIKAPRASAD BAJPAL.

The questions are of equal value.

Any THREE questions are to be answered.

1. आवश्यक टिप्पणियों के साथ नीचे लिखे पद्यों की व्याख्या हिन्दी में कीजिये—

(a) ऐसी नगरिया में केहि बिध रहना ।

नित छठ कलंक लगावै सहना ॥

एकै कुंवा पांच पनिहारी ।

एकै लेशुर भरै नौ नारी ॥

फट गया कुंवा बिनस गई बारी ।

बिलग भई पांथी पनिहारी ॥

कहे कबीर नाम बिनु बेरा ।

उठ गया हाकिम लुट गया डेरा ॥

(b) अहुट हाथ तन-सरवर, हिया कबैल तेहि माहं ।

नैनहि जानहु नौयरे, कर पहुँचत अबगाह ॥

(c) गज उधारि हरि थप्यो विभीषण,

ध्रुव अविचल कबहूँ न टरे ।

अम्बरीष की साप सुरति करि,

अजहु महामुनि ग्लानि गरे ॥

2. नीचे लिखे पद्यों का भावार्थ हिन्दी में लिखिये—

(a) रोषी रन रावन बोलाये बीर बानइत,

आगत जे रीति सब संजुग समाज की ।

चलो चतुरंग चमू अपरि छने निसान,

सेना सराइन जोग रातिघर-राजकी ॥

तुलसी बिलोकि कपि भासु किलकत

खलकत खलि काँगाख पातरी सुनाजकी ।

राम कख निरखि हरषे हनुमान,

मानों खेलवार खोली सौसताज बाजकी ॥

(b) मुरझिद नैनों बीच नबी है ।

साहब सपेद तिला बिच तारा अविगत बलख रही है ॥  
 आखी मचे पांखी चमकी पांखी मचे हारा ।  
 तेहि हारे दुरबीन लगावै उत्तरे भोजल पारा ॥  
 सुन सहरमें बास हमारा तहं सरबंगी आवे ।  
 साहब कबिर सदाकी संगी शब्द मझल से आवे ॥

(c) विषय-बारि मनमौन भिन्न नहिं हीत कबहुं पल एक ।

ताते सहीं बिपति अति दारुन जनमत जीनि अनेक ॥  
 कृपा डोरि बनसी पद-चंकुस, परमप्रेम सदु चारी ।  
 एहि विधि बेधि हरहु मेरो दुख, कौतुक राम तिहारी ॥

3 कबीर साहब के उपदेशों में सूफ़ी ढंग रहते हुए भी सूफ़ी कवियों में उनकी गिनती क्यों नहीं होती ? अपने पद्यकी साधक बाधक प्रमाणों से पुष्ट कीजिये ।

4. तुलसीदास जी के काव्यों में जितनी तरह की भाषाएँ हैं, उन सबका उल्लेख सीदाहरण कीजिये ।

5. पदवी, अवतध्वनि और अरिह्वर्युक्तों के लक्षण उदाहरण सहित लिखिये ।

### THIRD PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner—PT. SAKALNARAYAN SARMA.*

1. (क) मेरी भव बाधा हरी राधा नागरि सोय

जा तनकी भाई' मरे ग्राम हरित युति होय ॥ १ ॥

अजीतर्थी नाहीं रखी सुति सेवत एक भंग

नाक वासर बेसर लखी, बसि मुकत के संग ॥ २ ॥

(ख) आय दरबार विज्ञाने करीदार देखि

जापता कारण हार निकरूँ न मन के ।

भूषण भगत भौसिला के आय आनि ठाठे

बाजी भये उमराव तुलुक कारण के ।

साहि रक्षी जकि सिव साहि रक्षी तकि और  
 साहि रक्षी चकि बने व्योज बन बन के ।  
 यीश के भातु सो खुमान को प्रताप देखि  
 तारे सम तारे गये मूदि तुरकन के ॥ १ ॥  
 इन्द्रजिमि अंभ पर बाडव सुचंभ पर  
 रावन सदनपर रघुनाराज है ।  
 पीन वारिवाह पर सम्भुरति नाह पर  
 ज्यो सहस्र बाह पर राम विजराज है ।  
 दावा दुमदंड पर चीना सग भुंड पर  
 भूषन बितुंड पर जैसी सगराज है ।  
 तेजतम बंस पर कान्ह जिमि कंस पर  
 ज्यो मालिच्छ बंस पर सेर शिवराज है ॥ ४ ॥

(ग) जग बुधि तोलन हेतु मनहु यह तुला बनाई  
 भक्ति मुक्ति की जुगल पिटारी के लटकाई ।  
 मनु गांवन सों श्रीराज के बीनाहु फलती भई  
 कै रागसिन्धु के तरनहित यह दो अतूबी लई ॥ ५ ॥

इनमें किन्हीं चार पद्यों के अर्थ लिखो और उनके छन्द बतलाओ । 15

2. नाटक और नाटिका में क्या भेद है ? हिन्दी के वर्तमान नाट्य-साहित्य की प्रगति पर एक आलोचनात्मक निबन्ध लिखो । 10

3. श्लेष, रूपक, तुल्यशीगिता और अप्रसुतप्रशंसा के लक्षण लिखो तथा उपमा और उन्मेषा दोनों का पार्यक्य दिखलाओ । 10

4. काव्य किसे कहते हैं ? गद्य और पद्य-काव्य में किसका स्थान बड़ा है ? हिन्दी में गद्य-काव्य कब प्रारम्भ हुआ है ? उसमें ध्वनि और लक्ष्य अर्थ उपलब्ध हो सकते हैं कि नहीं ? 10

5. ब्रजभाषा की कविता में 'का १ और 'ने १ विभक्ति प्रयुक्त नहीं होतीं । उनके कार्य का निर्वाह कैसे होता है ? उसकी अपादान में कौन २ दिग्ग व्यवहृत होते हैं ? उनमें कौन सबसे अच्छा है ? 5

## SECOND HALF

Examiner—PT. JAGANNATH PRASAD CHATURVEDI.

The FIRST and SECOND questions and ANY ONE of the remaining three are to be attempted.

1. नीचे लिखे पद्य की व्याख्या सरल हिन्दी में विशद रूप से कीजिये और छन्द तथा अलंकार के नाम लिखिये—

देख सखी देख अनमेख ऐसी मेख यह  
जाहि पेख तेज रवि हू को मंद हूँ गयो  
हरी चंद ताप सब जिय को नसाइ चित  
आनंद बढ़ाइ भाइ अति कृति सों क्यो ।  
ग्वाल उडु गन बीच वेनु कों बजाइ सुधा  
रस बर खाइ मान कमल लजा दयो ।  
गोरज समूह चन पटल उघारि बह  
गोप कुल कुमुद निसाकर उदै भयो ॥

2. नीचे लिखे पद्या के सम्बन्ध में आप क्या जानते हैं, सरल हिन्दी में विस्तारपूर्वक अर्थ सहित लिखिये और छन्द तथा अलंकार भी बताइये—

प्रकृति यहाँ एकान्त बैठि निज रूप सँवारति पल पल पलटति मेस कनिक कवि छिन  
छिन चारति विमल अम्बु सर मुकुर न मेंह मुखबिम्ब निहारति अपनी कवि पै मोहि आपही  
तन मन वारति, सगति, सजावति, सरसति, हसति, दरसति प्यारी बहुरि सराहति भाग पाय  
सुठि चितर सारौ विहरति विविध विलास भरी जीवन के मद सनि ललकति, किलकति,  
पुलकति, निरखति, धिरकति, बनिठनि मधुर मंजु कवि पुंज कटा छिरकति बन कुंजन चितवति,  
रिभवति, हसति, डसति सुसक्याति, हरति मन ॥

3. परमानन्द दास कनोजिया ब्राह्मण की पूरी वार्ता लिखिये ।

4. ग्रामसुन्दर दास जी के कथनानुसार “कविता की कसौटी” क्या है लिखिये ।

5. ब्रजभाषा और खड़ीबोली के गद्या के बारे में आप क्या जानते हैं लिखिये ।

## FOURTH PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner*—DR. PITAMBAR DATT BARTHWAL

1. Write an essay in Hindi of about 1,500 words, discussing *any one* of the following subjects:— 50

(1) 'Jawahar Lal's accusation against modern Hindi poetry that it is *Darbārī* is in a way both true and false. Though the modern poets do not compose their poems for pleasing the ears of the benevolent mighty, yet in spite of their apparent differences from the *Darbārī* (*Śringārī*) poets, they do not in reality strike a note very different from theirs.'

(2) Is it a mere coincidence that the rise of prose literature in Hindi synchronises with the advent of the English in India or are the two facts related with one another as effect and cause?

(3) How do you account for the pessimistic note in modern poetry? Is it the harbinger of a higher optimism or an end in itself?

## SECOND HALF

*Examiner*—PT. AMBIKA PRASAD BAJPAL.

Write an essay of about 1,500 words in Hindi on *one* of the following subjects:— 50

(1) What is your opinion in regard to the influence of Sūfism on Hindi literature? Was it permanent? If not, why?

(2) 'Hindi and Urdu are not different from each other as languages'. Discuss and comment on the above.

(3) Describe how Raja Sivaprasad tried to evolve a common language for Hindus and Musalmans, and to what extent he succeeded.

## Urdu.

## FIRST PAPER

*Examiners*— { MR. NASIR ALI KHAN CHAUDHURI, M.A.  
SIR Z. R. ZAHID SUHRAWARDY, Kt., M.A., B.L.  
BAR-AT-LAW

*The figures in the margin indicate full marks.*

*Answer SIX questions only, but Questions 4 and 6 must be attempted.*

1. Illustrate the influence of European colonies in India on the language and literature of Urdu. 16

2. Describe fully the material improvement made by Urdu poetry under the pen of Mir Taqi Mir. 16

3. Compare and contrast, in Urdu, Wali and Dard as ghazal-writers and Sauda and Zauq as qasida-writers. 16

4. What are the distinguishing features of the Lucknow school of Urdu as compared with those of the Delhi school? Support your answer by illustrations. Which of the schools do you prefer, and why? 18

5. (a) What do you think of Mathnawi as being the most useful form of poetry? 18

(b) What are the merits of the Mathnawis of Nawab Mirza Shauq? Compare any one of them with Sihr-ul Bayān. 16

6. Which of the two have contributed more to the literature and language of Urdu—Ghalib or Anis? Estimate the value of each with reference to their contributions. 18

7. (a) What do you understand by Urdu Shāiri-ka-Jadīd rang? Notice any remarkable poem of this period, and briefly discuss its merits. 16

(b) Compare Azad and Hali as writers of biography, bringing out the characteristics of the style of each.

8. Fix the position of Drama in Urdu literature, and notice two of the prominent dramas in the language. 16

9. Do you know any Hindu poets of outstanding merit? Criticize three of them with reference to their works. 16

10. Write notes on the following:— 16

(i) Khan Ārzu, (ii) Mushaf, (iii) Nawab Sayed Mohd. Azad, (iv) Sabras, (v) Chup ki dād, (vi) Sihl-i-mumtana'.

## SECOND PAPER.

*The questions are of equal value.*

*Write the answers in Urdu.*

### FIRST HALF

Examiner—KILAN BHALLUR SHAMSUL-ULAMA MD. HEDAYET HOSSAIN, F.A.S.B.,  
M.R.A.S.

*Answer ANY THREE questions.*

1. Explain the following:—

عیان ہے ہر طرف عالم میں حسن بے حجاب اس کا

بغیر از دیدہ حیران نہیں جگ میں نقاب اس کا

ہوا ہے مجھ کوں شمع بزم یکرنگی سوں یو روشن

کہ ہر ذرے اپر تاباں ہے دائم آفتاب اس کا

کرے عشاق کوں جیوں صورت دیوارِ حیرت سوں

اگر پردے سوں را ہووے جمال بے حجاب اس کا

سچن نے اک نظر دیکھا نگہ مست سمن جس کن  
 خرابات دو عالم میں سداں ہے وہ خراب اس کا  
 مراد دل پاک ہے ازبس ولی زنگ کدورت سے  
 ہوا جیون جوہر آئینہ مخفی نیچ و تاب اس کا

2.

Either,

Write a critical note on the *Mathnawi* of Mir Hasan, and compare it with *Gulār-i Nasīm*, pointing out the merits and demerits of both, if any.

Or,

Discuss the following:—

”... اتنی بات ضرور ماننی پڑیگی کہ ولی سے پہلے اردو نے اچھی خاصی نشور نما پا لی تھی اور جس وقت کہ ولی ریختے کا زمانہ تھا اس وقت تک الفاظ، ترکیب اور بندشوں کا کافی سرمایہ جمع ہو چکا تھا اور جذبات و خیالات کے ساتھ طرز گفتار اور اسالیب بیان کے عنوانات بھی قائم ہو چکے تھے“ \*

3. Write a note on the linguistic and grammatical peculiarities of the *Diwān* of Wali.

4. Give an account of the life of Mir Taqī, Mir, and discuss the importance of *Zikr-i Mir*, his autobiography, in settling certain disputed incidents of his life.

5. Discuss fully:—

نہیں مثنوی ہے یہ اک پہلجہری  
 مسلسل ہے مڑتی کی گویا لڑی  
 نئی طرز ہے اور نئی ہے زبان  
 نہیں مثنوی ہے یہ سحر البیان  
 رہیگا جہان میں مرا اس سے نام  
 کہ ہے یادگار جہان یہ کلام  
 جو منصف سنیں گے کہیں گے یہی  
 نہ ایسی ہوئی ہے نہ ہوگی کبھی



Write the answers in Urdu

SECOND HALF

Examiner—MAULVI M. MAHFUZUL HAQ, M.A.

Answer ANY THREE QUESTIONS.

1. Rewrite the following in modern Urdu, explaining the overlined words and phrases:—

بنی کے تحقیق خدا کے سمیائے ستر ہزار پردے اور جیانے کے ہور  
اندھارے کے - اگر اس میں تے یک پردہ اٹھ جاوے تو اس کی آنچ تے  
میں جالں - ہور ایک وقت ایسا ہوتا ہے سمجھو اور دیکھو بے پردا اندھارے  
کے ارجیالے کے عارفان پر ہے وائے واصلان پر پردے نورانی و بے واصلان کا صفا  
پردا ہوتا ہے - سو محمد کا نور اے عزیز اول ربوبیت کا پردا سوائے تن جمالی  
جسم کے پردے کرن انپڑے باج اس جمل الرہیت کے پردے ممکن الوجود  
کرن انپڑ سکے - الہیت کے پردے کرن انپڑے عارف الوجود کرن انپڑ سکے - اس  
روح القدس کے پردے کرن انپڑے باج اس کبریائی کے پردے کرن بہتر جاگا  
دونوں عالم اسے دیکھنے کے معنی یوں محمد دیکھے جو آفتاب کے ارجیالے  
میں تارے اچکر نہیں دستے یوں ہی دونوں عالم کو آفتاب ہو ٹیکر اسے معلوم  
ٹیکا \*

2. Discuss the following statement, and support your answer by quotations:—

'It (i.e. *Fasāna-i 'Ajā'ib*) is conventional in subject and in style and is written after the manner of stock tales in Persian.'

3. Criticize the following:—

..... لسانیاتی تحقیق کے لحاظ سے یہ ( رسائل حضرت بندہ نواز )

ایک اہم چیز ہے اور موجود صورت میں اردو نثر کا پہلا نمونہ ہے - اس کی  
زبان کئی لحاظ سے قدیم دیکھنی سے مختلف ہے - اس کی صورت کھڑی  
بولی سے زیادہ متاثر معلوم ہوتی ہے اور اس کے برخلاف دیکھنی نثر کی  
صورت کم و بیش پنجابی سے زیادہ مشابہ ہے \*

4. Give an account of the life and writings of Mir Sher 'Ali, 'Afsos, and discuss the importance of his 'Ārū'ish-i Mahfil among the works produced at the Fort William College, Calcutta.

5. *Either,*

Compare the style of Fasāna-i 'Ajā'ib with that of 'Ārū'ish-i Mahfil.

*Or,*

Give a brief résumé of the contents of either Fasāna-i 'Ajā'ib or 'Ārū'ish-i Mahfil.

### THIRD PAPER

#### FIRST HALF

Examiner—MR. NASIR ALI KHAN CHAUDHURI, M.A.

*The figures in the margin indicate full marks.*

1. (a) Hali quotes Milton in the following words:— 10

”شعركي خوبي يہ ہے کہ سادہ ہو۔ جوش سے بہرا ہوا اور اصلیت پر مبنی ہو“ \*

How does Hali endorse these remarks? Expand and explain, giving illustrations.

(b) What four points does Hali mention about the merits of a Masnavi? Criticize Hali's view about گلزارِ نسیم.

2. *Either,*

Estimate the services rendered by Sir Syed to the Muslims in India. 12

*Or,*

Describe the peculiarities of his style with reference to مضامین سر سید, and show how it has affected the Urdu literature.

3. *Either,*

Compare the character of Sultan Salahuddin with that of King Richard II. 10

*Or,*

Write a note on Abdul Halim's capacities and success as a novelist. 10

4. Compare Agha Hashr with Mirza Mohd. Hadi as a drama-writer, with special reference to the heroes of مرقع لیلیٰ و مجنون and خوبصورتِ بلا.

12

## SECOND HALF.

Examiner—MAULVI MD. ISHAQUE, M.A., B.Sc.

Only THREE questions carry full marks.

1. (a) What was the object of Mirza Ghalib in writing Qasidas in praise of persons of high rank?

(b) Where do you place Ghalib among Ghazal-writers? Discuss fully.

2. (a) Criticize مسلسل حالی as a poem.

(b) What is واقعہ نگاری ? What خصوصیات cf واقعہ نگاری do you observe in Anis ?

3. Explain fully with reference to the context where necessary :—

(i) نقش فریادی ہے کسکی شوخیء تحریر کا

کاغذی ہے پیرہن ہر پیکرِ تصویر کا

یکقدمِ رحشت سے درسِ دفترِ امکان کہلا

جادہ اجزائے دو عالم دشت کا شیرازہ تھا

فریاد کی کوئی آہ نہیں ہے

نالہ پابند نے نہیں ہے

ممکن ہے کرے خضر سکندر سے تیرا ذکر

گولب کو نہ دے چشمہٴ حیوان سے طہارت

(ii) اگر شش جہت میں کوئی دلربا ہے

تو دل انکا نایدیدہ اسپرِ فدا ہے

اگر خواب میں کچھہ نظر آ گیا ہے

تو یاد اوسکی دن رات نامِ خدا ہے

بہری سب کی رحشت سے روداد ہے یان

جسے دیکھئے قیدِ سرفراہ ہے یان

(iii) بہرے درِ مقصود تے اس درجِ دہاں کو  
 دریائے معانی تے بڑھا طبع رواں کو  
 آگاہ کر آغازِ تکلم تے زباں کو  
 عاشق ہو فصاحت بھی وہ دے حسن بیان کو  
 تحسین کا سموات سے غل نا بہہ سمک ہو  
 ہو گوشِ بندے کا ملاحت وہ نمک ہو

4. Hali remarks :—

شاعر کا معراجِ کمال یہ ہے کہ اس کا : م ہموار اور اصول کے موافق  
 ہو اور کہیں کہیں اس میں ایسا حیرت انگیز جوارہ نظر آئے جس سے شاعر کا  
 کمال خاص و عام کے دلوں پر نقش ہو جائے \*

Test Ghalib, Anis, and Hali in the light of the above remarks.

5. Scan couplets 1 and 3 of part (i), any one couplet from part (ii), and any one couplet from part (iii) of Question 3 above.

#### FOURTH PAPER

*The questions are of equal value.*

##### FIRST HALF

*Examiner*—MAULVI MD. ISHAQUE, M.A., B.Sc.

1. Write an essay in Urdu on *one* of the following:—

- (a) Who made the first and the second Urdu translations of the Qurān? Compare the style, and give the chief characteristics of both.
- (b) The development of Urdu prose in the 19th century.
- (c) Ghālīb as an Urdu prose-writer and the peculiarities of his style.

##### SECOND HALF

*Examiner*—MR. NASIR ALI KHAN CHAUDHURI, M.A.

Write an essay on *one* of the following:—

- (a) Influence of European way of thinking on Sir Syed in matters social and religious as pervading in his writings.
- (b) Changes made in Urdu grammar, prosody, and fiction, during the last 50 or 60 years,

**Bengali (Subsidiary)****FIFTH PAPER***Examiner—MR. BISWAPATI CHAUDHURI, M.A.**The questions are of equal value.**Candidates are expected to answer all the questions in Bengali.*

1. Summarise Sanjib Chandra's description of পানামো.

*Or,*

Write a short note on the character of Sir Ashutosh as depicted by Dinesh Chandra Sen.

2. Explain any two of the following passages with reference to the context:—

(a) যে ব্যক্তি চন্দ্রে কলক ভিন্ন আর কিছুই দেখে না, কুস্মে কীট ভিন্ন আর কিছু ভাবিতে পারে না, মৃণালে কণ্টক ভিন্ন আর কিছু বুঝে না, তাহার জ্ঞান দুঃখী এ জগতে আর কে ?

(b) তিনি জীবনে যে সকল ভ্রমপ্রমাদ করিয়াছিলেন, তাহার পূর্ণ প্রায়শ্চিত্ত করিয়া গিয়াছেন। স্বখে অথবা দুঃখে তাঁহার জীবন যে ভাবে অতিবাহিত হউক, তাঁহার মানবজন্ম-ধারণ নিরর্থক হয় নাই, তিনি তাঁহার স্বদেশকে উন্নত ও গৌরবান্বিত করিয়া গিয়াছেন।

(c) অতীত স্মৃতির স্বপ্নে ভোর হইয়া ঘরের কোণে কাণাকাণি করিলে চলিবে না, মায়ের পূজা করিতে হইবে। ভীষ্মদ্রোণের নাম লইলে হইবে না, হৃদয়ের মধ্যে তাঁহাদের প্রভাব অম্লভব করা চাই।

3. Rewrite briefly, in your own words, any one of the following stories:—

সোভার অগ্নিপরীক্ষা, বেহলার বাসর, শাহনামা রচনা, রামের স্মৃতি।

4. Amplify the thought contained in any two of the following passages:—

(a) হায়রে প্রকৃতি সনে মানবের মন

বাধা আছে কি বন্ধনে বুঝিতে না পারি,

নকুণ্ডা যামিনী-দ্বিবা প্রভেদে এমন,

কেন হেন উঠে মনে চিন্তার লহরী ?

- (b) ওহে জিভুবনপতি, বৃথিনা তোমার মতি,  
কিছুই অভাব তব নাহি,—  
হৃদয়ে হৃদয়ে তব ভিক্ষা মাগি ফির প্রভু  
সবার সর্বস্বধন চাহি ।
- (c) ধর্ম নহে সম্পদের হেতু  
মহারাজ, নহে সে সুখের ক্ষুদ্র সেতু,—  
ধর্মই ধর্মের শেষ ।

5. Translate into Bengali:—

He passed the sleeping soldiers at the gate ; he crossed the courtyard with its sleeping dogs and sleeping pigeons ; he walked through the rooms where the servants were sleeping. At last he entered the room of the sleeping princess herself. He bent over the sleeping princess, and gently touched her forehead with his hand. She opened her eyes and smiled. 'Ah it is you, my prince! I have been waiting for you,' she said. Suddenly the whole palace was filled with noise. The servants awoke and went on with their work. The fire burned up brightly in the kitchen. The dogs barked, and the pigeons flew about. The horses went on eating their hay, and the soldiers continued their march at the gate.

### SIXTH PAPER

Examiner—DR. T. C. DASGUPTA, M.A., PH.D.

*The figures in the margin indicate full marks.*

1. Frame words to illustrate the use of five of the following Bengali উদ্ধৃত affixes :— 15

আই, আনা, আমি, দার, পনা, দাজ, গিরি, আলি ।

Or,

Write a note on the Bengali অব্যয় (Indeclinables) and give five examples.

2. Change four of the following sentences into assertive ones:— 20

(a) বাড়ী যাও, (b) তোমার মজল হউক, (c) ভোগ অপেক্ষা  
ত্যাগই কি ভাল নহে? (d) কানাডা দেশ কোথায়? (e) কি আশ্চর্য্য!  
তুমি এখানে কিরূপে আসিলে. (f) কি বিরাট এই হিমালয়!

Or,

Rewrite the following passage into chaste and elegant Bengali:—

ব্যাপারটা ঘটে বর্জমান; ভরা বর্ষায় একবার বেড়াতে বেরিয়েছি,  
এমন সময়ে আকাশ আঁধারিয়ে এল; রাতও এক পহর ছাড়িয়ে গেছে।

সেই সৰু রাস্তায় গাড়ীটা দানোর মত দুটো চোখ রাঙা ক'রে গৌঁ গৌঁ করে ছুটে চলেছে, বড় বড় ধারা কেটে জল হচ্ছে। জলের মধ্য দিয়ে পথ। লোকজন নেই, মোটরটা ঘট্‌ঘট্‌ করতে হঠাৎ থেমে গেল। এই জল-ঝড়ের রাত, বাঘ-ভালুকের কথা ছেড়ে দেওয়া যাক, যদি ডাকাতে ধরে তা হলেও বাচন নেই।

3. Estimate the value of the *Sāktā* contribution to Bengali literature. 25

Or,

Show your acquaintance with *five* of the following : -

- (a) The Mahābhārata by Nityānanda Ghosh.
- (b) Mrigalubdha by Ratirām.
- (c) The Padmā-Purāṇa by Nārāyaṇ Dev.
- (d) Karmānanda by Jādunandan Das.
- (e) The Padas by Ray Basanta.
- (f) Vidyā-Sundara by Govinda Das.
- (g) Kālcā by Govinda Das.

4. Translate into Bengali:—

20

Gold! so there *was* gold in the Antarctic. The question a wondering world had asked for a hundred years without a reply, was answered now. The baffling armour of ice had parted momentarily to reveal the secret. But it was only momentarily. The boom of tortured ice sounded again. That beach line was narrowing. The nine knew it too, for they were working like madmen.

5. Translate into English:—

আমি ইলাব্রত দেশের রাজকুমারী। আমার স্বামী ভাঙ্ ও সিদ্ধি খাইয়া পাগল হইয়াছেন, সতিনীকে মাথায় রাখিয়াছেন। আমি তাঁহার ঘর ছাড়িয়া আসিয়াছি। কালকেতুকে আমি বড় ভালবাসি, সে আমার ভক্ত; আমি তাহার দুঃখমোচন করিতে আসিয়াছি। আমি এইখানেই থাকিব।

## Hindi (Subsidiary.)

### FIFTH PAPER

Examiner.—PT. BABU MISRA, JYOTISHACHARYYA.

The figures in the margin indicate full marks.

1. Explain fully *any two* of the following:—

24

- (a) नृत्तल किसलय मलङ्कारम्,

काव्यलिङ्गा मम निम्नि ग्रामि भान् ।

कुबलय विपिन कुन्दा वन सरिसा,  
 बारिद तम तेल जनु बरिसा ।  
 जेहि तर रहीं करत सोइ पीरा,  
 उरग स्वास सन त्रिविध समोरा ।  
 तल भेस कर मन भर तोरा,  
 जानत प्रिया एक मन मोरा ।  
 सो मन रहत सदा तीहि पाहीं,  
 जानु प्रीति-रस एतनहि साहीं ॥

(b) साईं सन भर दुष्ट जन इनकी यही सुभाव,  
 खाल छिंचावेँ आपनी पर बन्धन के दाव ।  
 परबन्धन के दाव खाल अपनी छिंचावावेँ,  
 सुख काटि के कुटिय तऊ पर बाज न आवेँ ।  
 कह गिरिधर कविराय जरे अपनी कुटिलाई,  
 जल में गिरि सड़ गये तऊ छींड़ी न खुटाई ॥

(c) लाल करि लोचन चढ़ाये बंक भौंछेँ बेन  
 मोलत लषन लाल देव दशम्य की,  
 लक्ष्मिकारी डारि छीं मरदि महरावन की  
 मेघनाद मुख मेजीं आसमान पथ की ।  
 सारथी समेत सेना सागर में बोरीं छन  
 पूरी करि लखिराम देवन आय की ;  
 चूर करि खोपरी दशन दशमुख तुरि  
 धरि में मिलाय देहीं रावन के रथ को ।

(d) निज बल-बौर-प्रसिद्ध महीसा,  
 टोउ कर जोरि नाम पद सीसा ।  
 मोक्ष "मातु अनुग्रह कीजे,  
 त्वं प्रसन्न मोहिं यह वर दोजे ॥  
 मिले मागधी सन सुन सोई,  
 चहुँ दिशि बिदित जासु जस होई ।  
 करि पूरन मदेश अभिलाषा,  
 'एवमस्तु' सौरभि तहँ भाषा ॥



2. Write in simple prose the substance of any one of the following :—

15

(a) करम गति टारिहु नाहिं टरे ।

कहँ वह राहु कहाँ वे रवि शशि आनि संयोग परे ।

गुरु वसिष्ठ पण्डित अति ज्ञानी रवि पचि लगन धरे,

पिता-मरन अरु हरन सिया की बन में विपति परे ।

तौन लोक भावी के वश में सुर-नर देख धरे,

सूरदास झीनी सो झोर है काहे की सोच करे ॥

(b) जब हुई समवेत शनैः शनैः,

सहित गो-गण मण्डलि-ग्वाल की ।

जब चली ब्रज-भूषण की लिये ;

वह चलकृत-गोकुल ग्राम की ॥

गगन के तल गोरज छा गई,

दश-दिशा बहु शब्दमयी हुई ।

विशद गोकुल के प्रति गेह में ;

बह चला वर खीत विनोद का ॥

(c) कहता तो बहुतै मिला, गहता मिला न कोइ ।

सो कहता वहि जान टै, जो ना गहता होइ ॥

शब्द सँभारे बोलिये, शब्द के हाथ न पाव ॥

एक शब्द करै औषधि, एक शब्द करै घाव ॥

जो सबही कौं देत है, दाता कहिये सोइ ।

जलधर बरसत सम विषम, थल न विचारत कोइ ॥

3. Explain any two of the following, giving the context and adding notes where necessary :—

16

(a) राजा अपने ही देश में मान पाता है और विद्वान का मान सब स्थानों में होता है । इस प्रकार की शिक्षा सुनकर महाराज अपने मन में कृतकर्म करने लगे कि यह ऐसा अभिमानी पण्डित है कि मेरे ही सामने पण्डितों को बड़ाई करता है और राजाओं की नीचा दिखाता है ।

(b) हाय ! यशभूमि को बेटी, तुम्हारे जन्म से ती प्रियी पवित्र हुई । तुम्हारे शीश को बड़ाई तो पावक, वसिष्ठ जी और अरुण्यती ने की थी । हाय ! तू क्या थी और

तेरा कैसा परिचाम हो गया। आह ! संसार उलट गया, आज मेरे जीवन का कुछ काम न रहा, आज संसार सूना उजाड़ जंगल सा हो गया। दुख भोगने ही की मुझे चेतना मिली है !

(c) ब्रह्म, विचारने पर ज्ञात होता है कि जिस एक ईश्वर, एक ब्राह्म, एक तत्व और अत्यन्त दूरवर्षी एक ईश्वरीपल्लव्य की ओर यह समय छटि जी मधुर, मन्द, चट्पट गति तथा अज्ञातरूप से चलायमान है, वह प्रेम छोड़कर दूसरा क्या हो सकता है ? क्योंकि प्रेम से मधुरतर कोई दूसरा पदार्थ नहीं है। इससे बलवान, उन्नतम कुछ नहीं है।

4. Please translate into English any one of the following :— 10

(a) राजा उसे देखते ही कांप उठा और लड़खड़ाती सी जुबान से बोला कि हे महाराज, आप कौन हैं और मेरे पास किस प्रयोजन से आये हैं। उस देवी पुरुष ने बादल की गरज के समान गम्भीर उत्तर दिया कि मैं सत्य हूँ, मैं अन्धी की आँखें खोलता हूँ, मैं उनके आगे से धोखे की टट्टी हटाता हूँ, मैं मृगदन्ष्ट्रा के भटके हुओं का धम मिटाता हूँ और सपने के भूले हुओं की नींद से जगाता हूँ, हे भोज, यदि कुछ साहस रखता है तो आ, हमारे साथ आ और हमारे तेज के प्रभाव से मनुष्यों के मन के मन्दिरों का भेद ले।

(b) मन की इस खींचातानी में मेरे बाहर की दुनिया, मुझे एकबाणी भूल सी गई थी। मैं जल्दी जल्दी टहल रहा था। हताश मुझे कुछ चेतना सी आ गई। मैं ने अपना मुख, जरा भी सिंकोड़कर गम्भीर बना लिखा और चाल धीनी कर ली। परन्तु मेरी आँखें चकमक चारों ओर दौड़ रही थीं और कान द्वार-पटों की आड़ पाने के लिये व्याकुल थे। मन न जाने क्यों, दूसरे कमरों के भीतर का हाल जानने के लिए बेतरह व्यथ था।

5. (a) Give a brief description of those circumstances under which Sita was repudiated. 10

Or,

Write in your own words the conversation between Sita and Trijata.

(b) Write in Hindi (about ten lines) what you know about Kalidass or Ayodhya Singh Upadhyaya. 10

6. Explain the meaning of an illustrate in simple sentences any five of the following :— 15

आँखें फाड़ना, फिसल पड़ना, लाल-पीली होना, मुँह की खाना, छाती के पीपल, हाथ लगना, नाक रगड़ना।

## SIXTH PAPER

Examiner—MR. SIBNARAYAN LALA, A.I.S.A.

The figures in the margin indicate full marks.

1. (a) Translate the following into simple Hindi :—

6

It is always desirable to rise early because by so doing one gets a good start so far as his day's work is concerned over the late risers. The early riser has also the advantage of breathing the fresh and invigorating air of the early morning which gives additional energy to the system. The early riser is generally an active and quick worker while the late riser is lethargic and sleepy. This is because his system has not enjoyed the benefit of the invigorating effect of the early morning air. The early riser as he retires to rest also at an early hour enjoys his rest more than he who retires late to rest.

(b) Translate any two of the following into English :—

12

(i) इतने बड़े अनन्त तेज की राशि दिवाकर ।

तपते तीनों लोक बीच, पूजित ही घर घर ॥

किन्तु समय पर राहु उन्हे यस लेता जाकर ।

कृश कर सकते नहीं हजारों यद्यपि हैं कर ॥

बह पहले होते अस्त या यस्त समस्त प्रभारहित ।

फिर होते मुक्त प्रकाश से युक्त पूर्व में अभ्युदित ॥

(ii) क्षमामयी, तू दयामयी है, -क्षेममयी है ।

सुधामयी, वात्सल्यमयी, तू प्रेममयी है ।

विभवशालिनी, विश्वपालिनी, दुखहर्त्री है ।

भयनिवारिणी, शान्तिकारिणी, सुखकर्त्री है ।

हे शरणदायिनी देवि ! तू करती सब का वाण है ।

हे मातृभूमि ! सन्मान हम, तू जननी तू प्राण है ॥

(iii) देते हैं दिखाई सब दृश्य अभिराम यहाँ,

सुषमा सभी की सुधि श्याम की दिलाती हैं ।

फूली फली सुरभित कचिर हुआलियों से,

सुरभि उन्हीं की दिव्य देह की ही आती है ।

सुयश उन्हीं का शक-सारिका सुगती सदा

कूक कूक कीकिला उन्हीं का गुण गाती है ।

हरीभरी हग सुखदाई मनभाई मंजु

यह व्रज-मेदिनी उन्हीं की कहलाती है ॥

(iv) देखकर बाधा विविध, बहु बिन्न चरते नहीं ।

रङ्ग भरीसि भाग के दुख-भोग पड़ताते नहीं ॥

काम कितना ही कठिन ही किन्तु उकताते नहीं ।

भौड़ में चंचल बने जो वीर दिखलाते नहीं ॥

ही गये थक आन में उनकी बुरे दिन भी भले ।

सब जगह सब काल में वे ही मिले फूले फले ॥

2. Estimate the position of Surdas and Deo in Hindi literature. 2½

Or,

Trace the historical development of mysticism in Hindi literature. Who was the chief exponent of this school, and what do you know of him?

3. Write short notes on any four of the following :— 20

Tulsidas, Keshava Das, Matiram Harischandra, Ayodhyasingh Upadhyaya, Maithilisharan Gupta, Sumitranandan Pant.

1. (a) Write a letter in Hindi to your friend, giving an account of the city of Calcutta or any hill-station you have visited. 10

(b) Fill up the gaps in the following :— 5

बहु मूर्ख—मन—बड़ा लज्जित—। पहले तो चाह—जान दे—; पर फिर सोच—कर घर—निकल विद्योपार्जन—परिश्रम—लगा और थोड़े ही दिनों में ऐसा पंडित—जिसका नाम आज तक चला—है। पढ़—लेने के—ससने धन भी कमाया जिससे—परिवार—दरिद्रता—कष्ट दूर ही—।

(c) What do you understand by the following? Illustrate :— 5

विभक्ति, कारक, कर्ता, तत्सम, समास ।

5. (a) Rewrite the following correctly, and give reasons for your corrections :— 10

अब समय बदल गई। ऊपर हम लिख आया है कि समय अपना अनुकूल साहित्य स्वयं तैयार करा लेती है। आज कल तो मुख्य विषय या भारत और गौण विषय है हृदय की भावों का साकार लोला। इसी में इसे हिन्दी की क्रांतियुग कहनी चाहिये। अभी हिन्दी का कविता का भाषा और उसका भाव दोनों ब्रजभाषा की प्रभाव से विमुक्त नहीं हो पाया है।

(b) Give the tatsama (Sanskrit) forms of any ten of the following :— 10

पिय, गाछ, जीभ, आस, धरम, मुकुत, साँचे, सुरति, पुत्र, कीरति, आसिष, सजाना, दसनन ।

**Maithili (Subsidiary)****FIFTH PAPER***Examiner—Pt. BABU MISRA, JYOTISHACHARYYA.**The questions are of equal value.***FIRST HALF***Only THREE questions are to be attempted.*

1. Explain any two of the following :—

- (a) गौतम कहल रहइ गय जाय पापनि पाथर भितर समाय ।  
जल जगु पिवइ अन्न ने खाइ आयस छाडि कतहु जगु जाइ ।  
जन्तुमान सौं आयसहीन हीएतहु यावत पातक चीष ।  
दिवारावि तप करइ सङ्गि, हृदय ध्यान परमेश्वर बिष्णु ॥

- (b) उपवन पहुचल सकल कुमारी  
तोइथि फूल नवावधि डारि ।  
तक तक काया चण विसराम  
देखथि चलि चलि भल आगम ।  
सौता कहलनि हित सखि कान  
अहंकाँ अहि सम सगुनक ज्ञान ।  
जखनहि सौं अयलहुं आराम  
वेरि वेरि फरकै अन्न वाम ॥

- (c) एक समय भयदौना अवनी भारें व्याकुल भेली ।  
सुरभिरूप बलि कनइत कनइत धाम विरलिक गेली ।  
सकल देवगण तनिका संगे पुकलनि विधि कह धरणी ।  
सख सख से सभटा कहलनि दुष्ट दमनन करणी ॥

2. Explain any one in English or Maithili :—

- (a) चानन भेल विषम सर रे भूषन भेल भारी ।  
सपनहुं हरि नहि आएल रे गोकुल गिरिधारी ।  
एकसरि ठाढ़ि कदमतर रे पथ हरिथि मुगरी ।  
हरि विनु देख दगध भेल रे आमर भेल सारी ।  
जाइ जाइ तोंहि उधव हे तोंहि मधुपुर जाइ ।  
चन्द्रबदनि नहि औचिति रे बध लागत काइ ।

भनहि विद्यापति तनमन दय सुनु गुनमति नारी ।

आज आओत हरि गोकुल दे पथ चहु भटकारी ॥

- (b) जाइत देखल पथ नागरि सजनि मे आगरि सुबुधि से आनि ।  
 कमलता सनि सुन्दरि सजनि मे विह निरमाओल आनि ।  
 हसिगमनि जकाँ चलइत सजनि मे देखइति राजकुमारि ।  
 जनिका एहनि सोहागिनि सजनि मे पाओल पदारथ आरि ।  
 नील बसन तन घेरल सजनि मे सिर लेल चिहुर समारि ।  
 तापर भनर पियय रस सजनि मे पैसल पांखि पसारि ।  
 केहरि सन कटिगुन अहि सजनि मे लोचन अम्बुज-धारि ।  
 विद्यापति इही गाओल सजनि मे गुन पाओल अवधारि ॥

3. Sketch the character of एकलव्य following the lines of the Maha-bharatasara.

4. Give the meaning of the following :—

विराटक पुरुषापर द्रौपदी सब हतान कहि सुनौलथिन्ह परस ओ अन्यायी राजा अपना सारक रोचें तथा द्रौपदीकेँ सामान्य दासी जानि एकर किछु खियाली नहि कौलक । भीमी ओहिठाम उपस्थित छलाह और तत्कालहिँ कौचककेँ मारि देवाक इच्छा कयलन्हि । किन्तु युधिष्ठिर प्रगट होएवा में किछु बिलम्ब जानि निरोध कयलन्हि ।

5. How far is Chandā Jha successful in handling the character of Parashuram ?

## SECOND HALF

*Attempt only THREE questions.*

6. Translate any one into English :—

(a) विद्यापतिक कविताक अध्ययनसँ, विद्यापतिक ग्रन्थक पर्यालोचनासँ ई पता लगैत अहि जे विद्यापति पञ्चदेवतोपासक छलाह । विद्यापतिक पदावली में राधा-कृष्णक प्रेमलोला सबसँ प्रधान छेन्ह, विद्यापतिक मङ्गेश्वानी, नवारी आदि शिवभक्तिमय पदावलीसँ मैथिल-समाज अपरिचित नहिँ अहि ।

(b) किन्वदन्ती अहि जे महादेव विद्यापतिक भक्तिसँ प्रसन्न भय विद्यापतिक ओहिठाम नौकरी करैत छलाह । हुनक नाम छलैन्ह उदगा । विद्यापति कतहु जाइत छलाह, राधा में पिबास लगलैन्ह उदगाकेँ कहलथिन्ह छोडे पानि पिबा । ओ बिदा भेल छोडे काल में एक लोटा पानि भेने पड़ैत भेल ।

7. Clearly bring out the meaning of the following :—

कथि उदार जगमें रूपण, जि न देखि ने खाथि  
सब धन धानक हेतु तजि, अन्त मरकमें जाथि  
रूपण धनक सख्य करथि, भोग करे अहि धान  
मधु खाइत अहि मनुज मिलि, ताँकी ह्वे ह्वान ॥

8. Give in Maithili the substance of the following :—

भीमक वहत आग्रह कयलोपर ओ ब्रह्मण हुनक वधाके स्त्रीकार कयलक और ओकर माय भीमक हेतु पाक करय लगलन्हि । भीम सब इच्छान्ता अपना माय और माय लोकनि के बुझाय भोजनक हेतु उपस्थित भेलाह और आनन्दपूर्वक भोजन कय ओहि राक्षसक स्थान पर जाक स्तुति रहलाह । सम्यहि काल ओ राक्षस आग्रह और अपना भक्त्यके स्तुति देखि ओकरा पर एक लात प्रहार केलक ! भीम अत्यन्त क्रुद्ध भय उठलाह और ओकरा सँ हाथावाही करय लगलाह, अन्त में एक दू घड़ी में हेरान क य ओकरा निःप्राण कय देलन्हि ।

9. Translate into Maithili :—

Literature is at once the cause and the effect of the social progress. Success in literature is not an accident. All literature is founded upon psychological laws and involves principles, which are true for all peoples and for all times. In literature, as in life our admiration for mere cleverness has a touch of contempt in it. All good literature rests primarily on insight.

10. Write, in Maithili, a letter to your father, telling him how you have spent your summer vacation.

## SIXTH PAPER

Examiner—PT. BABU MISRA, JYOTISHACHARYYA.

*The questions are of equal value.*

### FIRST HALF

*Only THREE questions are to be attempted.*

1. Decline अपने or राम in all cases.
2. Give the feminine forms of any five of the following :—  
पितौ, वेडा, चमार, जेना, घोबि, पुरुष, शयूर, माम, पण्डित ।
3. Use any three of the following in your own sentences :—  
(a) दसक लाठी एकक बीक ।  
(b) मूर्खक लाठी मांक कपार ।

- (c) भोज ने भात ढङ्ढङ्ग गीत ।  
 (d) गाम मेल ने सीमा लय मारि ।  
 (e) कथल धयलपर ऊय जगन्नाथ ।  
 (f) चल ने आवि तँ चङ्गना टेढ़ ।

4. Name and expound Samasas in *any four* of the following :—

दुगीला, दुपहरिचा, सांभ्रात, पञ्चानन, राजपक्ष, भलमानुस, पतभाङ्ग, बरहवद्दू, बभनटोली ।

5. Parse the words underlined below :—

सुन्दरी सीताक खयल में विश्रामित खयल गेलाह और रामके संगे नेने गेलाह ।

### SECOND HALF

*Only THREE questions are to be attempted.*

6. Write notes on *any four* of the following :—

चन्दा भा, हर्षनाथ भा, गोविन्ददास भा, ज्योतिरीश्वर ठाकुर, जीवन भा, मनबीध ।

7. Trace the origin and development of Maithili.

8. How far is Vaishnava literature indebted to Vidyāpati ?

*Or,*

‘Vidyāpati’s poems are nearly all Vaishnava hymns or bhajanas.’  
 Discuss fully.

9. Account for the popularity of Pārijātaharana of Umāpati or the Rāmāyan of Chanda Jha.

*Or,*

‘Umāpati was contemporary of Vidyāpati.’ Discuss.

10. Who is your most favourite poet in Maithili, and why?



**Urdu (Subsidiary.)****FIFTH PAPER.***Examiner—MR. NASIR ALI KHAN CHAUDHURI, M.A.**The questions are of equal value.**ANY SIX questions may be attempted.*

1. How far will you regard DAGH as a poet who reflected the social life and thought of the time in which he flourished?

2. What was the object of Hali in writing his Musaddas **موسدس**? How far has he gained that object? What is your opinion about it as a poem?

3. Compare Hali and DAGH as poets. Who exerted the greater influence, on which class and in what direction?

4. What was the social condition of the Musalmans in India when **توبتہ النصح** was written? What means did Dr. Nazir Ahmad adopt to improve that condition? Discuss it fully.

5. What sort of mentality ruled over the aristocracy of Lucknow in the days of **سرشار**? Describe the character of **عسکری مرزا** as depicted in **سیرکھار**.

6. Explain fully :—

(۱) خبر نہیں یہ کہ کیا ہے ۔ کیسا ہے

کون ہے ۔ اور تو کہاں ہے

پہ اپنے میں اور تجھ میں ہم نے

علاقہ اک استوار دیکھا

سلوک ہیں ترے سب سے یکساں

وہ گبر و ترسا ہوں یا مسلمان

نہ اونسے تیرا کچھہ بیز پایا

نہ اونسے تیرا کچھہ پیار دیکھا

بشر سے کچھہ ہوسکے نہ حالی

تو ایسے جینے سے فائدہ کیا

ہمیشہ بیکار تجھکو دے دے  
کبھی نہ سرگرم کار دیکھا

(b) ہندو سے لڑیں نہ گبر سے بھر کریں  
شر سے بچیں اور شر کے عوض خیر کریں  
جو کہتے ہیں یہ کہ ہے جہنم دنیا  
وہ آئیں اور اس بہشت کی سیر کریں  
اے آپِ رود گنگا وہ دن ہے یاد تجھکو  
اترا ترے کنارے جب کاروان ہمارا  
مذہب نہیں سکھاتا آپس میں بیز کرنا  
ہندو ہیں ہم وطن ہے ہندوستان ہمارا  
یونان و مصر و روم سب منگئے جہاں سے  
اب تک مگر ہے باقی نام و نشان ہمارا

2. Explain :--

(a) تمہارے پاس کہیں بھولکر نہ آیا ہو  
ہمیں تلاش ہے ہم نامہ بر کو دیکھتے ہیں  
مقام رشک ہوا عرصۂ قیامت بھی  
تجہی کو دیکھتا ہے جس بشر کو دیکھتے ہیں  
وقتِ خرام ناز دکھا دو جدا جدا  
یہ چال حشر کی یہ روش آسمان کی ہے  
سن کر مرا فسانۂ غم اوس نے یہ کہا  
ہو جائے جھوٹ سچ - یہی خونی بیان کی ہے

- (b) (۱) سوت نہ کپاس کوری سے لٹہم لٹھا \*
- (۲) اور یہ غتر غتر سنا کئے \*
- (۳) یہ سن کے سن ہو گئے کاتو تو لہو نہیں \*
- (۴) عالم العیب \*
- (۵) یہ ادبدا کے اسطرح نکھر کے رہتے ہیں \*

8. Translate into English : -

(a) اتنا تو بتادے مجھے اے ناصح مشفق

دیکھا ہے کہ اس ماہ لقا کو نہیں دیکھا  
ایسی نظرِ شوخ میں تمکین نہیں دیکھی

اس طرح تغافل میں حیا کو نہیں دیکھا  
بچیگی یاروں میں کوئی آکر یہ توبہ زاهد خدا خدا کر  
کہاں کی حجت ہے فیصلہ کر شتاب نادان پی پلا کر

(b) وہ قومیں جو ہیں آج غمخوار انسان

درندوں کی اور انکی طینت تھی یکساں  
جہاں عدل کے آج جاری ہیں فرمان

بہت دور پہنچا تھا اس ظلم و طغیان  
بنے آج جو گلہ بان ہیں ہمارے  
وہ تیرے بھیڑئیے آدمی خوار سارے

9. Rewrite in your own words :—

(a) مگر ہمکو تمہارے جب ہی ہوگی جب تم اپنے قول کے پورے  
نکلو۔ بے اسکے کلیجے کو ٹھنڈک دل کو خوشی نہ ہوگی۔ نواب صاحب نے  
پھر قسمیں کھائیں اور کہا اس میں ذرا بال برابر بھی فرق نہیں ہو سکتا۔ اس

ہفتے میں آزما لینا - اتنے میں کڑے بولنے لگے اور نوبتی نے نوبت بجائی - شہنائی کی لبھانے والی آواز کانوں میں آئی - مرغ سحر نے بانگ دی \*

(b) غرض علیم رخصت ہو کر مردانے مکان میں گیا تو میان کلیم کو پیام طلب جا سنایا - کلیم - کیا ہے - خیریت تو ہے آجکل تو ہم لوگوں پر بڑی عنایت ہے - علیم - بھلا کبھی عنایت نہیں بھی ہوتی - اتنے میں سلیم بھی دروازے سے نمودار ہوا \*

#### SIXTH PAPER.

Examiner—MAULVI M. MAHFUZUL HAQ, M.A.

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Write a note on the Deccan school of Urdu poetry.
2. Give an account of the life and writings of *either* میر انیس *or* مرزا غالب
3. Discuss the contribution of *either* پنڈت رتن ناتھ سرشار *or* عبدالحکیم شرر to Urdu prose literature.
4. Write a critical appreciation of the poetry of *either* حالی *or* داغ
5. Give an account of the development of Urdu drama, and discuss its future, with special reference to the 'talkies'.
6. Write philological notes on *any eight* of the following:—  
 شاباش - الگ تھلگ - دسپنا - دشمن - سراپا - برخوردار -  
 جمہور - پروانگی - بہتیرے - چاقو \*
7. Parse the following:—

سدا ایک ہی رخ نہیں چلتی کشتی  
 چلو تم ادھر کو ہوا ہو جبھر کی

8. Give the Gender of the following, and state if any of them is **مستثنى** (or, Common Gender) :—

\* جان - سانس - تعريذ - مالا - گنگا - دستخط - مروتی - چیل

### Assamese (Subsidiary)

#### FIFTH PAPER

Examiner—MR. S. K. BHUYAN, M.A.

*The questions are of equal value.*

*At least ONE question from the text must be answered in Assamese, and the rest may be answered either in Assamese or in English.*

#### FIRST HALF

N.B.—Answer only THREE questions from this half, Question 5 being compulsory.

1. Give the substance of one of the following poems:—

আনন্দৰাম বৰুৱাৰ স্বৰ্গযাত্রা, বহাগীৰ বিয়া, সীতাহৰণ।

2. Write a short essay on the glorious of Assam on the basis of Mr. Bezbaruwa's poem অসম-সম্রাট and Srijut Kamalakanta Bhattacharyya's জাতীয় গৌৰৱ.

3. Bring out the inner significance of Maulavi Mafizuddin Hazarika's poems পুণ্যৰ বাট আৰু পাপৰ বাট, দেৱী-বাট, বাউ-বাট.

4. Write short notes on three of the following poets:—

শঙ্কৰদেৱ, মাধৱ কন্দলী, মাধৱদেৱ, বঘুনাথ চৌধাৰী, ভোলানাথ দাস, দুৰ্গেশ্বৰ শৰ্মা।

5. Give the substance of the following passage:—

মই অম্পৃক্ত, মই ঘৃণা, মই অতি হীন—

উচ্চৰ ভৱিত তুচ্চ হই পৰি আছোঁ চিৰদিন।

নহয় নিজৰ দোষ,

ভথাপি লোকৰ ৰোষ,

সকল ঘৰত জন্ম, নাই আন একো তুল—

সেয়ে মোৰ মহাপাপ, হানে তাৰে শত তুল।

সমাজত নাই স্থান,                      য'তে ত'তে অপমান,  
বিচাৰৰ নামত অবিচাৰ ভাগাত মিলে মোৰ  
মোৰ ওপৰত উঠে যত অপৰাধৰ হোৱা ।

সনাতন ধৰ্ম সংকীৰ্ণ                      ভায়ে ভায়ে কৰে বিদীৰ্ণ  
বেদ-পুৰাণৰ উদাৰ কথা লুকাই থাকিল কত ?  
প্রায়শ্চিত্তৰ বিধিখন মাথোঁ আছে মোৰ সমুখত ।

ধনীয়ে কৰিছে ঘিণ,                      মানীয়ে ভাবিছে হীন,  
বহুকাল ধৰি আছে বোধ কৰি মন্দিৰৰ সিংহদ্বাৰ,  
প্ৰবেশৰ তাত নাই হেনো মোৰ একোৰে অধিকাৰ ।

দেৱতাও হয় চুৰা                      ভাগ্য মোৰ এনেকুৱা,  
নিজকে নিজেই ভাবি আছোঁ মই চিৰ অৱনত  
ইদৰেই যাব ই জীৱন মোৰ হেচা, ঠেলা, গচকত ।

## SECOND HALF

## (Prose)

N.B.—Answer only THREE questions from this half, Question 10 being compulsory.

6. Describe Hemchandra Barua's early struggles to acquire learning and enlightenment.

7. Give an account *either* of the measures of reform introduced by King Rudra Singha *or* of the characteristics and value of Assamese Buranjis.

8. What are the factors which strengthen the bonds of union among the people of one nationality?

9. Give an estimate of the prose style *either* of Lakshminath Bezbarua *or* of Satyanath Bara.

10. Translate the following passage into English:—

সংসাৰৰ সকলো প্ৰাণীতকৈ যে মানুহে ইমান বেছি উন্নতি কৰিছে, তাৰ কাৰণ এই যে সিহঁতে নিজৰ মনৰ ভাব আনক ভাঙি কব পাৰে। এটা মানুহে নিজ বুদ্ধিৰে যি শিকে তাক তাৰ লগৰীয়াবিলাকক বুজাই কব পাৰে। এই কৰ্মতা নথকাহেঁতেন মানুহে কেতিয়াও ইমানখিনি উন্নতি কৰিব নোৱাৰে। যেয়ে যি শিকে, সি তাৰ লগতে লোপ হুলাইতেন। এতিয়া সেই কৰ্মতাৰ গুণত আমি আনে শিকা বা উলিওৱা কথাৰ পৰা উপকাৰ পাবলৈ। যি উপায়

ঘাৰাই এজনৰ মনৰ ভাব আন এজনক প্ৰকাশকৈ কব পৰা যায় সেই উপায়ৰ নাম ভাষা ! ভাষা কেনেকৈ হল, তাক কোনে সাজিলে, এইবোৰ কথা আমাক এতিয়া নালাগে। সম্ভ্ৰতি ইয়াকে জানি থলেই হব যে আমি ভাষাৰ গুণতহে অগ্ৰ জীৱজন্তুতকৈ বেচি উন্নতি লাভ কৰিব পাৰিছোঁ। কিন্তু অকল ভাষাই আমাৰ ইমান উপকাৰ সাধিব নোৱাৰিলেহেঁতেন। যেতিয়া মাহুহে লিখিব নাজানিছিল, যেতিয়া কাপৰ ব্যৱহাৰ পৃথিবীত নাছিল, সেই সময়ত ভাষাবোৰ বৰ আদৰ নাছিল। ভাষা যে ইমান গুণবতী হল ই কেৱল লিখাৰ বলতহে। মাহুহে বুদ্ধিৰে উলিওৱা কথা লিখি থবলৈ এইটো উপা নথকাহেঁতেন ভাষাৰ পৰা আমি ইমান উপকাৰ কেতিয়াও নাপাওঁ।

#### SIXTH PAPER

*Examiner*—MR. A. BORAH, M.A.

*The questions are of equal value.*

*Answers may be given either in ASSAMESE or in ENGLISH.*

#### FIRST HALF

*Attempt ANY THREE questions of this half.*

1. Name two poets of pre-Vaishnava period with their approximate dates, and write what you know of their writings.
2. Write what you know of the *Satra* system in Assam, and how they helped to develop the Assamese literature.
3. Write a critical estimate of Sankardev's *Kirtan* or *Rukminiharan Kabya* and Madhabdev's *Namghosha*.
4. What are the *Buranjees*? Discuss their importance in the history of Assamese literature. Compare and contrast the prose style of Bhattadev with that of the Buranjees.
5. Write what part the early Christian missionaries and the Assamese students of Calcutta played in developing modern Assamese literature.

#### SECOND HALF

1. Decline the pronoun *মই* in all cases in both the numbers, and decline the verb *খা* in *সকাল* *ভুক্তকাল* and *ভবিষ্যৎ কাল* in all persons; and decline the verb *ওমল* in *পাচনী* form in *ভবিষ্যৎ কাল* in all persons.

2. Rewrite the following sentences, correctirng the mistakes:—

তুমি ছোৱালীজনক নামাতিবি সি তেওঁইতৰ আগত তোক লাগি দিছে।

চোবসকল পুলিচ ধৰি আনিছে, তাইইতক জেলে দিব হবল।

মই তাক কলেজত যাবলৈ কৈছিল কিন্তু তেঁও নগলোঁ।

3. Name the suffixes commonly used in Assamese to indicate plural number, and give an example of each of them. Write the noun forms of খে, বা, ধৰ, adjective forms of গুটি, বিহু, আহিন, জাদ, গোচৰ, and state in what sense the ভাক্ত particles অনি and আলি are used, and give an example of each of them.

## Oriya (Subsidiary)

### FIFTH PAPER

Examiner—Mr. MAHESWAR DAS, M.A.

*The questions are of equal value.*

1. Explain, with reference to the context, any two of the following:—

(a) ମାନବ ଜାତି ମଧ୍ୟରେ କବି ସ୍ପର୍ଶମଣି, ସେ ଯହିଁରେ ଦ୍ଵାଦ ଦେବେ ସେ ସୁନା ଦେବ । ଅମେମାନେ ଯାହାକୁ ମାକଡ଼ା ପଥର ବୋଲି ଗୋଡ଼ରେ ଅଡ଼େଇ ଦେଉଁ, କବି ଯେତେ ସେଥିରେ ଅଙ୍କୁଳ ସ୍ପର୍ଶ କରନ୍ତି ତେବେ ସେହି ଶୁଣି ଅମମାନଙ୍କ ନିକଟରେ ମରକତ ମଣି ହୋଇ ଉପସ୍ଥିତ ହୁଏ ।

(b) ମରତକା-ମୟ ଚରୁଗୁନ୍ୟ ମରୁ  
ଘୋର ବୃଷା ରଙ୍ଗାଳୟ ହେ ।  
ଦିଗନ୍ତ ବିସ୍ତୃତ ଜ୍ଵଳନ୍ତ ପ୍ରାନ୍ତର  
ପଥଗୁନ୍ୟ ନରାଶୟ ହେ ॥  
ସେମରୁ ଅନ୍ତରୁ ବହେ ସୁଧାସ୍ରୋତ  
ପିଥ ସେହି ସୁଧା-ପୟ ହେ ॥

(c) କାହିଁ ସେହି ନଦୀ ପୁଣ୍ୟତୋୟା ସରସ୍ଵତୀ,  
ଯାର କୁଳେ ର୍ଷିକଣ୍ଠେ ସୁରଲ୍ଲ ଗମ୍ଭୀରେ



ଭଣସୁକ, ବେଦରୂପେ ମୋହି ବସୁମତୀ  
 ଅମୃତ ସଙ୍ଗୀତ ତାନେ, ଉଚ୍ଛାସିଣ ଧୀରେ  
 ହୃଦୟର ଉଚ୍ଚତମ ଆଶା ଲହରୀରେ ?

2. Translate into Oriya :—

One day two friends were walking on the bank of a river when they came across a bear. At the sight of it one of them climbed upon a tree nearby but the other finding no other means to escape lay down on the ground. The bear came near and smelling him all over the body went away thinking him for a dead man. He came down from the tree and asked his friend, 'What was the thing that the bear was whispering in your ear'?

3. Translate into English :—

ଏହାର ପ୍ରଧାନ କାରଣ ଶିକ୍ଷିତ ଯୁବକମାନଙ୍କ ଔଦାସୀନ୍ୟ, ଦ୍ଵିତୀୟ ଅଭ୍ୟାସର ମୋଡ଼ । ଅନେକଙ୍କ ମନର ଭାବ ଏହି ଯେ ସେ ସବୁ ଗୁରୁତର ବିଷୟରେ ଆମମାନଙ୍କର ଦୃଷ୍ଟିକ୍ଷେପ କରିବା ପ୍ରୟୋଜନ କଣ ? ଯାହା ଦେବାର ଦେଇ ଯାଉ ଅଛି । କିନ୍ତୁ ହାୟ ! ହାୟ ! ଏହି ଭାବ ଯେ ଆମମାନଙ୍କ ଅଧ୍ୟୋଗତର ମୂଳକାରଣ, ଏହା ମୋ ବର୍ତ୍ତମାନ ଆମମାନଙ୍କ ମନୁଷ୍ୟ ନାମର ଅଯୋଗ୍ୟ କରି ଅଛି, ଏହା ସେମାନେ ହୃଦୟଙ୍ଗମ କରିବାକୁ ସୁଜା ଇଚ୍ଛା କରନ୍ତି ନାହିଁ ।

4. (a) Expand the idea contained in *one* of the following :—

(i) ଚୋର ମନ ଶଶିରେ, (ii) ଦର ଶିଳି କୁମ୍ଭୀର ।

(b) Give the colloquial Oriya equivalents of *any five* of the following :—

Trees ; tanks ; goats ; wife ; husband ; bears ; pigs.

5. Give in simple Oriya the summary of the ideas contained in the poem ଭରତଭବନା or any other poem of Madhusudan Rao

## SIXTH PAPER

*Examiner—MR. BINAYAK MISRA.**The questions are of equal value.*

1. Write what you know about the lives of authors of the following works :—

ବରୁଚ-ଗୀତା, ଚଉପଦାବୁଷଣ, ଅର୍ତ୍ତଶିଳା ଚଉତିଶା, and ବଲଙ୍କାସମାୟଣ ।

Or,

2. Write a critical note on the କେଶବକୋଇଲି ।

Or,

Give the subject-matter of କାନ୍ତକୋଇଲି ।

3. Describe the general character of ancient Oriya fictional poems.

Or,

Give a list of works of Oriya poets who were contemporary of Lord Chaitanya.

4. Frame sentences to illustrate the two different meanings of each of the following words :—

ସଜ, ଦେଶ, ଜାଲ, and କେଶ ।

5. (i) Give the masculine forms of *any five* of the following :—

ନାମ, ଦେଲୁଣୀ, ଭାଉଜ, ଶାଳୀ, ହିଅ, ମାରିବରାଡ଼ି, and ଭଣ୍ଡାରୁଣୀ ।

(ii) Give a complete list of Oriya plural suffixes.

6. (i) Conjugate the Oriya ଦା ଥାଉ in past and future tenses.

(ii) Decline ସେ in all cases and numbers.

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## BASIC LANGUAGES

(Pali)

Examiner—MR. S. N. MITRA, M.A.

## SEVENTH PAPER

*The figures in the margin indicate full marks.*

1. Give the genesis of Pali, and show how it stand midway between Old Indo-Aryan and Sanskrit.

Or,

Show how Pali has influenced the Indian vernaculars.

Or,

Estimate the importance of Pali Jātaka stories as the oldest elements of folk-literature.

2. Translate into English or your own vernacular *three* of the following extracts (*two* from Group A and *one* from Group B), adding philological notes on the words italicized :—

12+6=18

## (GROUP A)

(a) Bodhisatto 'samma. uḍaḍe maṃ osīdāpesi, kin nu *kho* etan' ti āha. 'Nāhan taṃ dhammo sudhammatāya gaheṭvā gacchāmi, *bhariyāya* pana me tava hadayaṃmaṃse dohaḷo uppanno, taṃ ahaṃ tava *hadayaṃ* khādāpetukāmo' ti.

(b) 'Samma, *kallientena* te sundaraṃ kataṃ, sace hi *amlūkāṃ* udaro hadayaṃ bhaveyya sākhaḡgesu carantānaṃ cuṇṇa-vicuṇṇaṃ bhaveyyā' ti. 'Kahaṃ pana tumhe ḡhapethā' ti. Bodhisatto avidūre ekaṃ *udumbaraṃ* (dassesi).

(c) Sārathi kiṇcāpi Buddhuppādassa *abhāvā* pabbajitaṃ vā pabbajitaṃ vā na jānāti, devānubhāvena *pana* 'pabbajito nāṃ' esa devā' ti vatvā *pabbajjāya* guṇe vaṇṇesi. Bodhisatto pabbajjāya ruciṃ uppādetvā taṃ divasaṃ *ujjānaṃ* agamāsi.

(d) 'Bhonte, buddhārammaṃ pītiṃ gaheṭvā udakapiṭṭhe patitṭhaṃ labhitvā *paḡhaviṃ* maddanto *viya* āgato mhi' ti vutte, 'pubbe pi upāsakā samuddamaḡjhe nāvāya bhinnāya Buddhaguṇo anussarantā patitṭhaṃ labhiṃsū' ti vatvā tena yācito atītaṃ āhari.

## (GROUP B)

(e) *Samantā* dhajiniṃ *disvā* yuttaṃ Māraṃ savāhanaṃ |  
yuddhāya pacuggacchāmi mā maṃ ḡhānā acāvayi ||  
Yaṃ te taṃ na ppasahati senaṃ loko sadevako |  
teṃ te *paḡḡāya* bhāḡjāmi āmaṃ *paḡḡaṃ* va amhanā ||

(f) Pakkodano duddhakhīro 'ham asmi  
anutire Mahiyā samānavāso |  
channā kuṭi āhito *gini*,  
atha ce patṭhayaṃ pavassa deva ||  
Akkodhano vigatakhīlo 'ham asmi  
anutire Mahiyā ekarattivāso |  
*vivaḡā* kuṭi *nibbuto* gini,  
atha ce patṭhayaṃ pavassa deva ||

3. (i) Discuss *any four* of the following :—

8

(a) Ablative in *-smā, -mhā* in the Noun declension, (b) Instrumental plural in *-ehi*, (c) the lost Dual, (d) Māgadhism in Pali, (e) functions of the Niggahita, and (f) formation of the Causative.

(ii) State clearly the Buddhist conception of Rebirth.

6

(iii) Comment on *any six* of the following forms, and show how they are represented in the vernaculars : *appa, aṭṭhāṭṭhiya, bhatta, vuḍḍha, pakkhalāna, nacca, pannarasa, vaṇṇa, nahāpita*, and *heḷḷhā*.

( Pr. krit )

### SEVENTH PAPER

Examiners— { MR. HARGOBIND DAS SETH.  
,, BASANTA KUMAR CHATTERJI, M.A.  
,, MAHESWAR DAS, M.A.

The figures in the margin indicate full marks.

Answer Question 1 and ANY TWO of the rest.

1. Attempt either Group A or Group B :—

#### A.

(a) जादं कुङ्कुमपङ्कलीढमरठीगण्डप्यस्य चम्पस्य

धीषावद्विषदुहमुहकलिषा परफुलिषा मलिषा ।

मूले सामलमगलगमसलं लक्लिष्ये किंसुषं

पिञ्जितं भसलिहिं दीहिं वि दिसाभाएसु लग्नेहिं व ॥

(b) देखी—( किंचित् झिला ) छहि बिबुलण्य चम्पस्य पुरदी तुमं गाढं कङ्कणेष्य  
उत्ताषा हीसि । ता पठ संपदं चम्पस्य पुरदी सषं कदं किंपि वळ् । जदी तं कळ् जं  
सहाए पढीषदि, तं सुवषं जं कसवदए विवददि, सा चरिषी जा पिषं रंजिदि, सी पुसी जी  
कुलं लळिदि ।

(c) वैतालिकयोरेकः—सहाष संज्ञा भेदु देवस्य ।

एदं वासरजीवपिंडसरिसं चंडमुषी मंडलं

को जाषादि कहिं पि रुंपदि गदं एदस्मि कालं तरे ।

जादा किंच इषं पि दीहविरहा सीएष षाहि गदे

मुष्मासुहिदलोषवळ् षलिषी मौलं तपंकेहहा ॥

(i) Translate either (a) or (b) preferably into English or Bengali.

3

(ii) Explain (c) in your own vernacular.

5

- (iii) Account for the case-endings in 'अन्तात्' in (b) and 'अन्तसु' in (c) 4
- (iv) Derive 'लोपावृत्तिः' in (a) and 'लोपणव्य' in (c). 4
- (v) Explain the formation of 'पिच्छंतं' in (a), and give its alternative form, if any. 2

## B.

- (a) राजा— ( पुनस्तानुसन्धाय )

तिवलिबलिषणाहीवाङ्मूलेसु लग्नं

यथकलसपिषन्वाडम्बरसुखसंतं ।

जलपिबिडमिमीए सकलणं राक्षणपोत्तं

पिसुणदि तणलङ्गीचगिमं लं गिमं च ॥

(b) विचक्षणा—देव, एदं निषवौषदि—ए केवलं देवीए पिणीएण तिष्ठा अणुगदन्दि । तारामेत्तीए वि सङ्गित्तणं पत्ता कट्पूरमंजरीए । तेष तक्कञ्जसञ्जा अहं पुणी वि जीलग्गा विष्ण भविष्ण पिवेदङ्खं ।

- (c) किं गेषणद्विहिणा किमु वारुणीए

धूवेण किं अगुरुणा किमु कुङ्कुमेण ।

मिद्वत्तणे मङ्गिलसिन्धु ए किंपि अण्वं

रुञ्जीष अत्थि सरिसं पुण माणसस्य ॥

(i) Reproduce any two of the above extracts as literally as you can in English. 6

(ii) Point out and explain the देश्य words used in (a). 4.

(iii) Give the vernacular forms of the words used in (b). 4

(iv) Write the alternative forms of 'रुञ्जीए' in (a), 'भविष्ण' in (b), and 'रुञ्जीष' in (c). 3

(v) Explain the formation of 'सकलणं' in (a), 'निवेदङ्खं' in (b), and 'मिद्वत्तणे' in (c). 3

2. How are medial single consonants of Sanskrit words treated in Māhārāṣṭrī? Illustrate how, in consequence of this, the same Māhārāṣṭrī forms may represent several Sanskrit words. 15

3. Attempt a short description of the treatment of the conjunct consonants in the Prākṛits.

4. How are Sanskrit aspirates and sibilants treated in the Prākṛits? 15

5. Characterize either the Māgadhī or the Śaurasēnī form of Prākṛit, and mention the geographical areas where these were current. 15

6. Explain and illustrate the terms, Assimilation, Svarabhakti, Epenthesis, Metathesis, and Compensatory lengthening of vowels. 15

## (Persian)

## SEVENTH PAPER

Examiners— { Mr. NASIR ALI KHAN CHAUDHURI, M.A.  
 „ MUHAMMAD ALI SHIRAJI, M.A.

*The figures in the margin indicate full marks.*

1. Translate into English *any six* of the following:—

- (a) بازار گان را هزار دینار خسارت رسید \*
- (b) سگی از دکان قصابی پارۀ گوشت ربود \*
- (c) ای دیوانه از من چیزی طلب کن \*
- (d) معمل اصلی و چائی چین میباشد \*
- (e) در راه وطن خویش قربانی نمایم \*
- (f) شاه عباس (چهل و دو) ۴۲ سال پادشاهی کرد \*
- (g) تروپخانه دازه از هندوستان آمده است \*
- (h) شهر تبریز را پائی تفت خویش قرار داد \*
- (i) این سلطان باز آن را پس گرفت \*
- (j) نادر قلی چون خیال سلطنت در سر داشت \*
- (k) چون محمد حسن خان بقتل رسید \*
- (l) ترتیب نظام و مالیه را در تحت نظام آورد \*

2. Select *five* words from Question 1 that are used in your vernacular, noticing any change they have undergone. 10

3. (a) State with illustrations the rules for forming the Past and Future tenses. 6

- (b) How do you form plurals in Persian? Give examples. 4
- (c) How are Ordinals formed in Persian? Give examples. 4

4. Translate into Persian *any seven* of the following:— 14

- (a) Firdausi was a great man.
- (b) Iran is a good country.
- (c) The house is white.
- (d) Four men came.
- (e) Persian is a sweet language.
- (f) Give me a book.
- (g) I went to the city.

- (h) I saw a black dog.
  - (i) What is it in your hand?
  - (j) What have you purchased?
  - (k) Don't do this.
  - (l) Write your name.
  - (m) Go away from here.
  - (n) Read your lessons properly.
- 

## BENGALI

### EIGHTH PAPER

*Examiner*—MR. SUKUMAR SEN, M.A.

*The questions are of equal value.*

*Answer ANY FIVE of the following questions.*

1. (a) Is there any law of cerebralization in Prakrit? If so, how far is it applicable to Bengali? How can you explain its exceptions in Prakrit or in Bengali?
  - (b) How is the old Indo-Aryan sound *k* represented in New Bengali?
  2. Write short notes on *any five* of the following terms, and give two examples in Bengali for each of the five: *anaptyxis*, *prothesis*, *epenthesis*, *umlaut*, *vowel harmony*, *metathesis*, *glide*, *haplology*.
  3. Describe fully the phonetic and morphological changes from early Middle Bengali to New Bengali.
  4. Compare the personal affixes in the past, future, and habitual past tenses in New Bengali, and write short philological notes on them.
  5. What is the influence of the Dravidian speeches on Bengali according to Mr. B. C. Majumdar and Dr. S. K. Chatterji?
  6. Describe fully how Bengali is distinguished from its allied vernaculars.
  7. Discuss the Bengali Metrical system.
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## HINDI

### EIGHTH PAPER

*Examiner*—MR. LATAPRASAD SUKUL, M.A.

*Attempt FIVE questions only.*

*The questions are of equal value.*

1. Make a brief survey of the constituent elements of Hindi. Explain and discuss the statement that 'although there is a residuum of aboriginal element in Hindi, it is to be remembered that Hindi is empha-

tically an Aryan language both in grammar and in vocabulary'. How old is the Perso-Arabic element in Hindi?

2. Describe the different dialects of Hindi with the geographical distribution of each of them. Draw an outline map to illustrate your answer. In what point does Kellogg differ from Grierson and Hoernle on the subject of the dialects of Hindi?

3. What do you mean by the terms 'natural gender' and 'grammatical gender'? Do you agree that the absence of the neuter gender in Hindi is due to Semitic influence? Explain the gender of the following words:—

पुस्तक, जय, अग्नि, धूप, बत्तू, देह, लङ्कपन, बुढ़ापा जन, फटन, and महिला .

4. Explain and illustrate the terms Tatsama, Tadbhava, and Defi with respect to the classification of the vocabulary of NIA vernaculars. What do you mean by the terms Semitatsama? Illustrate the co-existence of Tatsama and Tadbhava words in Hindi, occasionally with a differentiation of meaning. Give examples of the use in Hindi of a few unchanged Sanskrit forms with case suffixes or verbal suffixes. How far are these unchanged Sanskrit forms organically connected with the language?

5. Define Hindostani. Urdū and Hindi after Grierson. What do you mean by the term High Hindi? State the circumstances that favoured its origin and development. Estimate the value of the Prem Sāgar in the evolution of High Hindi style.

6. In what sense is Hindi said to be gradually encroaching upon the geographical areas belonging to other vernaculars? Give an approximate number of persons speaking Hindi as a vernacular and of persons using Hindi as a second language. Discuss the claims of Hindi as the inter-provincial language for the whole of India.

7. Explain and illustrate *any five* of the following:—

- (i) Assimilation of vowels and consonants in Hindi.
- (ii) Epenthetic development of vowels in Hindi.
- (iii) Compensatory lengthening of vowels in Hindi.
- (iv) Metathesis of vowels and consonants in Hindi.
- (v) The honorific forms of verbs and pronouns in Hindi.
- (vi) The pejorative tendency in the use of vocables in Hindi.
- (vii) The syncopation of syllables in Hindi.
- (viii) Fractional numbers in Hindi.

8. Describe the main currents of linguistic contact and their effects in Hindi. Name five Portuguese, five Arabic, five Persian, and five English words current in uncultured Hindi.

9. Determine the form of the verbal root in Hindi. How does Kellogg distinguish between *close* and *open* roots? What is the usual form of the Infinitive of verbs? How can the Infinitive form of verbs be used as a *Gerund* or *Verbal Noun*? How is the oblique singular base of such verbal nouns prepared? What are the seven irregular verbs mentioned by Kellogg? Give their perfect participles and honorific imperative forms, and name the alternative roots from which these are formed. Explain and illustrate the different prayogas (प्रयोग) or constructions of Hindi verbs.

10. Write a short essay on the determination of linguistic forms by the exigencies of verse.



## URDU

## EIGHTH PAPER

*Examiner*—MR. BASANTAKUMAR CHATTERJEE, M.A.

*The questions are of equal value.*

## FIRST HALF

*Answer ANY THREE of the following questions.*

1. Discuss whether Urdu letters are adequate for correctly representing the vowel sounds in that language. Can you suggest any reformation in Urdu vowels if you think them to be inadequate?
2. Classify the Urdu consonants according to their places of articulation in standard pronunciation. Note if you find any difference in your own pronunciation.
3. Describe the principal dialects of Western Hindi, mentioning their characteristic differences from Urdu.
4. Mention the different postpositions for cases in Urdu, and explain them philologically.
5. Name the suffixes which form abstract nouns from other nouns and adjectives in Urdu, and give their etymologies, if known.

## SECOND HALF

*Attempt ANY THREE questions.*

1. Define 'Hindustānī', 'Urdū', and 'Hindī' after Sir George Abraham Grierson. What are the different headquarters of Hindī and Urdū? How have they affected the literary style? Indicate by means of an outline map the geographical area originally covered by Hindustānī, and its gradual spread and diffusion.
2. When and how did Hindustānī become known to European scholars? Give a short review of what these scholars have done for the advancement of Hindustānī studies. What do you know of the first Hindustānī Grammar and dictionary?
3. In what sense is Hindustānī gradually encroaching upon the geographical areas belonging to other vernaculars? What is the approximate number of speakers of Hindustānī (1) as a vernacular, and (2) as a second language? Discuss the claims of Hindustānī as the common language for all the provinces of India.
4. What do you mean by the terms 'natural gender' and 'grammatical gender'? Illustrate your answer with suitable examples. Do you think that the absence of the neuter gender in Hindustānī is due to Semitic influence? Explain the construction of the following sentences with respect to agreement in gender :—

(1) *rājā nē shernī mārī,*

راجا نے شیرنی ماری \*

(2) *woh ghorīpār sawār huā aur jangal aī rāh lī,*

وہ گھوڑی پر سوار ہوا اور جنگل کی راہ لی \*

(3) ek khādim nē mērā bāth pakrā aur mujhse kahne lagā,

\* ایک خادم نے میرا ہاتھ پکڑا اور مجھ سے کہنے لگا

5. Explain the terms Tatsama, Tadbhava, and Deśī as applied to the classification of words in NIA vernaculars. Give suitable illustrations for your answer. Do you think that most of the words classified as Deśī are either Tadbhava or foreign words? What do you mean by the term Semitatsama?

## PHILOSOPHY

### FIRST PAPER

#### (History of Ancient and Mediaeval European Philosophy)

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—PROF. J. R. BANERJEE, M.A., B.L.

N.B.—Answer ANY THREE questions.

1. Give the substance of Anaximenes's philosophy and examine it. It has been said that there was no further progress in the direction of the earlier Ionic physiologists after Anaximenes. Why was this progress stopped? Discuss the question of Heraclitus's place in the History of Greek Philosophy. Is he to be placed among the earlier Ionic philosophers?

*Or,*

Give an account of Zeno's doctrines, noticing specially his arguments against the reality of motion, the existence of the manifold, the reality of space, and the veracity of sensuous perception. Examine his arguments against these four. Criticize the main principle of his philosophic thought, and show that Heraclitus corrected it.

2. Fully develop the statement that Empedocles and Anaxagoras taught the existence of a spiritual force in addition to the material substances. 'His' (Empedocles's) philosophical system may be briefly characterized as an attempt at a combination between Eleatic being and Heraclitic becoming.' Discuss this. Notice Empedocles's contribution to the Theory of Evolution, and briefly compare and contrast his view on this subject with those of Lamarck and Darwin.

*Or,*

Explain fully Anaxagoras's doctrine of the *omoiomere*. In what respects does it stand opposed to the Atomic theory? Examine his system of philosophy. Is it correct to describe him as 'the termination and close of the Pre-Socratic Realism'? Fully discuss this question.

3. What are the points of agreement and difference between the Sophists and Socrates? Exhibit the Socratic Method. In what does Socrates's peculiar philosophical significance lie? Explain and examine

the Socratic conception of Knowledge in connection with his ethical teaching.

4. Exhibit Plato's Scientific Method. What do you know of (a) Plato's doctrine of the World-Soul, (b) his view on Transmigration of souls, and (c) his doctrine of Virtue and the Highest Good? Examine (b) and (c).

Or,

Write notes on:—

- (a) Aristotle's theology.
- (b) Aristotle's politics.
- (c) Aristotle's doctrine of potentiality and actuality.

Examine (a) and (b).

Or,

Trace the history of Scepticism in Greek philosophy, noticing specially Pyrrho's, Arcesilaus's, Carneades's, and Sextus Empiricus's doctrines. Criticize Pyrrho's doctrines.

5. What are the different forms of Neo-Platonism? What does Plotinus say about *Nous* and Matter? Examine the teaching of Neo-Platonism about mystical absorption into the One or swooning into the Absolute.

Or,

'The origin of the antithesis between nominalism and realism is to be found in the relation of Scholasticism to the philosophy of Plato and Aristotle.' Develop. Give an account of the philosophy of Duns Scotus, pointing out the main differences between his teaching and that of Thomas Aquinas.

## SECOND HALF

Examiner—MR. K. C. MOOKERJEE, M.A.

*Candidates are recommended to attempt only THREE questions, of which Question 9 should be one.*

1. What is *Platonism*?

2. 'Besides sensible things and Forms, Plato says there are the objects of mathematics, which occupy an intermediate position between sensible things and Forms.' (*Aristotle*.)

Do you think Aristotle is right in his ascription of this doctrine to Plato?

3. Examine the philosophical basis of Plato's attack on democracy.

4. 'Plato's scheme of communism is the most effective solution yet proposed of social and political conflicts.'

Consider this opinion.

5. Explain what Plato means by the 'Idea of the Good', carefully bearing in mind the relevant passages in the Republic.

6. 'Non-being is the other of being.' (*Sophist*.) Discuss Plato's view on the significance of 'negative judgments'.

7. Aristotle sometimes calls himself a Platonist. Does he do so with justice?

8. Discuss Plato's use of the term *imitation* in connection with the fine arts.

9. Comment on *any three* of the following passages:—

(a) Each in itself is one, but by reason of their community with actions and bodies, and with each other, they appear everywhere and each seems many. (*Rep. V*, 476.)

(b) Then the dialectical method alone proceeds in this way, destroying its hypothesis to get to the first principle of all and make itself secure. (*Rep. VII*, 533.)

(c) Injustice when great enough is mightier and freer and more masterly than justice. (*Rep. I*, 344.)

(d) From fair works of art there may smite upon their eyes and ears an affluence like a wind bringing health from happy regions, which, though they know it not, leads them from their earliest years into likeness and friendship and harmony with the principle of beauty. (*Rep. III*, 401.)

(e) And God, whether because he so willed or because there was some necessity upon him not to make more than one bed in nature, made that one which is the reality of a bed and only that. (*Rep. X*, 597.)

## SECOND PAPER

*The questions are of equal value.*

*Answer ANY THREE questions from EACH half.*

### FIRST HALF

*Examiner*—MR. HUMAYUN. Z. A. KABIR, M.A.

1. Can Descartes account for our knowledge of the external world?

*Or,*

How does Descartes *really* test the truth of a proposition?

2. 'For Spinoza, the particular is only an adjective of the absolute.' Do you agree?

*Or,*

Examine Leibnitz's principle of the identity of indiscernibles.

3. 'Leibnitz intellectualized all appearances just as Locke sensualized all concepts of the understanding.' Discuss.

*Or,*

How does Locke account for our complex ideas?

4. 'Berkeley was more consistent to Locke's principles than Locke himself.' Examine.

*Or,*

Examine Hume's account of Causality.

5. Briefly examine the accounts of *substance* in Locke, Berkeley, and Hume.

Or,

'Empiricism, as a doctrine of the logical derivation of ideas from experience, is open to doubt, but as the theory of the psychological origination of ideas from sensations, it is true.'

Discuss.

## SECOND HALF

*Examiner*—PROF. A. N. MOOKERJEE, M.A., PH.D.

1. 'The understanding makes Nature, but out of materials which it does not make.'

Explain the meaning and implication of the above Kantian dictum.

Or,

Explain and examine the distinction of Sense, Understanding, and Reason in Kant's philosophy.

Or,

Explain and furnish a critical estimate of what Kant means by the *Schematism of Pure Reason*.

2. 'The Ideas of Reason are not constitutive, but only regulative principles.'

Examine the above conclusion in the light of Post-Kantian Thought.

Or,

Explain the metaphysical importance attached by Kant to the faculty of Will. How was it developed in Post-Kantian Thought?

3. Give the substance of Fichte's criticism of Kant's philosophy. Summarize Fichte's theory of Religion.

Or,

Furnish a brief sketch of the views of Schelling on the following:—

(a) The Philosophy of History.

(b) The Philosophy of Art.

4. How is the Absolute conceived by Fichte, Schelling, Hegel, Schopenhauer, and Lotze respectively?

5. Give the substance of Lotze's criticism of the Rationalism of Hegel's philosophy.

## THIRD PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—PROF. A. N. MOOKERJEE, M.A., PH.D.

N.B.—*The candidates are expected to point out, wherever possible, points of similarity between Indian and European systems of Philosophy.*

*Attempt ANY THREE questions.*

1. Give a short critical account of the five-membered Syllogism of Indian Logic. How does Chārvāka refute the syllogistic mode of reasoning?
2. Formulate the main steps in the argument by which the Bauddha establishes his doctrine of Impermanence.
3. Give a short account of the subjective idealism of the Yogāchāra school of Bauddha.
4. How does the Jaina (Ārṇata) refute the Bauddha doctrine of Non-Soul (Nirātma-vāda)? Give a short explanatory account of the categories recognized in the Jaina system.
5. Trace the gradual development of the conception of Self in the philosophy of the Upanishads.
6. Summarize the teachings of the Bhagavad Gītā on one of the following :—
  - (a) Karma-Yoga.
  - (b) Jñāna-Yoga.
  - (c) Bhakti-Yoga.

## SECOND HALF

*Examiner*—DR. S. C. CHATTERJEE, M.A., PH.D.

*Answer ANY THREE questions.*

1. Explain fully Sāṃkara's conception of *Brahman* and *Māyā*, and examine his view of the relation between them as two principles of his monistic philosophy.
  2. Discuss the value and import of Rāmānuja's conception of reality as a trinity of individual selves (cit), the material world (acit), and God (Īśvara).
  3. Consider critically the Sāṃkhya doctrines of (a) a plurality of selves, (b) the relation of the self to the material world, and (c) the *gunas* as constitutive principles of the world-order.
  4. What is the real import of *Yoga* as a method and goal of spiritual culture? What system of thought is this culture based on? What is your estimate of its psychological and moral value?
  5. 'Immediate knowledge is the very essence of perception.' Discuss the truth of this statement with reference to the different theories of perception.
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## FOURTH PAPER

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

## FIRST HALF

*Examiner—MR. ADHARCIANDRA DAS, M.A.*

1. A word or a term possesses meaning. But is it generated out of the peculiar combination of the letters of a word merely, or is it that meaning has a less mystical source and is susceptible of a psychological analysis? Discuss with reference to the rôle of image in a meaning-situation, and indicate the relation that subsists between a word and its meaning.

2. From the traditional point of view judgment is taken to be essentially predicative. But this view has received an orientation in the school of the modern idealistic logic. Discuss.

3. According to some, our consciousness is co-extensive with judgment and judgment is an act of referring an ideal content to Reality.

Do not these two statements appear to be incompatible in view of the denial of the position that there are in fact 'floating ideas'?

4. What is simple apprehension? Can it be regarded as the most primary form of knowledge?

Discuss with reference to Hobhouse.

5. Can there be anything like consciousness of consciousness? How do you characterize self-consciousness? Consider in this connection the distinction between 'contemplation' and 'enjoyment' as insisted on by Alexander.

## SECOND HALF

*Examiner—DR. SUSILKUMAR MAITRA, M.A., PH.D.*

1. Does *reality* transcend *truth*? If so, in what sense?

2. Distinguish between the absolute and the relative views of truth, and give your own estimate of each.

3. The false is an indescribable floating appearance. Explain and discuss.

4. Explain the doctrine of the intrinsic validity of cognitions, and give your own estimate of it.

5. Distinguish between truth and its verification, and give a critical estimate of the Pragmatist theory of truth in this connection.

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## FIFTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—DR. S. K. DAS, M.A., PH.D.*

*Only THREE questions are to be attempted.*

1. Enunciate the different views of Space and Time, and elucidate fully the statement that Space and Time 'are presented to us as infinite and continuous wholes of parts'.
2. On what grounds is the relation of Ground and Consequent preferred to that of Cause and Effect? Discuss, in this connection, the force of the remark that 'the cause is always a reason, but a reason need not be the cause'.
3. How far, if at all, does the progressive dematerialization of matter countenance Eddington's view that 'the idea of a Universal Mind or Logos would be a fairly plausible inference from the present state of scientific theory; at least it is in harmony with it'?
4. Discuss fully the implications of the concept of Evolution. Does consciousness evolve? Consider the view of mind as an 'emergent'.
5. Expound fully the view that finite individuals are 'in ultimate analysis connexions of content within the real individual to which they belong'. Comment critically on the value and destiny of such an individual.

## SECOND HALF

*Examiner—DR. H. L. HALDAR, M.A., PH.D.*

*N.B.—Answer ANY THREE questions.*

1. Explain and examine Bradley's conception of the Absolute.
  2. How does Green show that nature as an order of mutually related objects and events implies a self-distinguishing mind as its necessary correlative? Compare Green with Edward Caird.
  3. Expound with your own reflections either Green's view of the nature and destiny of the finite self or Bosanquet's doctrine of the concrete universal.
  4. Is there any necessary antagonism between realism and idealism? Discuss the question as fully as you can.
  5. Give a critical account of *any one* of the realistic theories of recent times.
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**(Psychology.)****FIRST PAPER**

*The questions are of equal value.*

**FIRST HALF**

*Examiner*—DR. S. C. MITRA, M.A., D.PHIL.

*Attempt ANY THREE questions.*

1. Distinguish between an Image and an Idea, and discuss fully the various theories regarding the 'meaning' of 'Ideas'.
2. Evaluate McDougall's Hormic Theory of Human Action, and contrast it with the Reflex Theory, the Pleasure-pain Theory, and the Ideomotor Theory.
3. Write notes on *any three* of the following:—  
 (a) Range of attention, (b) Mediate Association, (c) The Colour-pyramid, (d) Sub-consciousness of ideas, (e) Local signs.
4. Describe the stages in the development of Self-consciousness, indicating clearly what you mean by the terms 'Empirical Self', 'Pure Self', and 'Internal perception of Self'.
5. Explain clearly what you understand by Redintegration, and enumerate with illustrations some of its general laws as enunciated by Hollingworth.

*Or,*

Write an essay *either* on the Psychology of Time perception *or* on the various aspects of the Relativity of Consciousness.

**SECOND HALF**

*Examiner*—MR. H. MAITI, M.A.

*Answer ANY THREE questions.*

1. Discuss the importance of Physiological Psychology for the scientific study of the mind.
  2. Draw a diagram or diagrams of the Eye so as to show the important parts thereof. Discuss critically the Young-Helmholtz theory of vision.
  3. Discuss the rôle of visceral changes in emotions in the light of Cannon's researches.
  4. Discuss the different theories of localization of (mental) functions in the brain on the basis of recent experimental and clinical studies on the subject.
  5. Write short notes on *any three*:—  
 (1) Müller's theory of specific nervous energy.  
 (2) Head's researches on cutaneous sensibility.  
 (3) The principle of the Final Common path.  
 (4) The Neurone doctrine.
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## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—MR. B. N. RAY, M.A.*

*Answer ANY THREE questions.*

1. Give a critical account of the Structural, the Functional, and the Behaviouristic standpoints in Psychology.
2. Give a brief sketch of the development of the doctrine of Psycho-analysis with special reference to Freud and Jung.
3. Trace the development of Psychiatry during the nineteenth century, showing that it may be divided into the study of three types of mental abnormality, viz. insanity, mental deficiency, and psychoneuroses.
4. What is the doctrine of Apperception? Indicate its importance in Wundt's system of Psychology.

*Or,*

Explain fully the concept of mental activity, and discuss the validity of James's account of the feeling of activity.

5. Attempt a brief survey of the modern conceptions of the nature of Personality.

*Or,*

Discuss critically the principal modern theories regarding the interpretation of instinctive behaviour, with special reference to the doctrine of McDougall.

## SECOND HALF

*Examiner—MR. H. D. BHATTACHARYYA, M.A.*

*Answer ANY THREE questions.*

1. Discuss the nature and validity of self-consciousness in the light of mental dissociation and multiple personality.

Briefly outline in this connection McDougall's theory on the nature of the self.

2. Distinguish hallucination, illusion, and delusion, with suitable illustrations. Indicate their relation to the unconscious, if any.

3. Discuss the etiology of Regression by reference to concrete cases. How is Regression distinguishable from Fixation?

4. Is there any common mechanism between Dream and Day-dream? Bring out the similarity, if any, by analyzing both.

*Or,*

Discuss how far the Behaviourists have succeeded in utilizing the data of animal psychology to explain human behaviour.

5. Distinguish animal insight from human reasoning, and discuss how far animals are capable of generalized thought.

*Or,*

Give a critical estimate of *Lloyd Morgan's canon* in the light of recent researches in animal psychology.

**(Logic.)****FIRST PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. A. C. MUKHERJEE, M.A.**N.B.—Answer ANY THREE questions.*

1. (a) 'A judgment expresses belief having reference to things, not to our ideas of things.'

(b) 'Judgment consists in the synthesis of ideas.'

Examine the logical value of these theories of judgment.

2. Discuss the view that universal judgments are always hypothetical. How does a hypothetical judgment refer to reality?

3. Enter into a critical consideration of the usual distinction between formal and material logic.

4. *A* is *b* or *c*. Bring out the full implications of this assertion. Does it exclude the suggestion that *A* may be both *b* and *c*?

5. Explain Bradley's theory of negation, with particular reference to the sense in which he accepts negation to be 'subjective'.

**SECOND HALF***Examiner—MR. HUMAYUN Z. A. KABIR, M.A.**Answer ANY THREE questions.*

1. Can syllogism give us knowledge of the particular?

*Or,*

Does all syllogism involve a *petitio principii*?

2. 'Inference is not merely the assertion of a new fact, but an assertion based upon another fact as its condition.' Discuss.

*Or,*

Can inference be regarded as a kind of judgment?

3. 'All inference depends on the unbroken individuality of a single subject.' Examine.

*Or,*

Examine the relation of inference to imagination.

4. 'Every judgment must involve an inductive element.' Discuss.

*Or,*

What is the basis of our inductive generalizations?

5. Must all thought move within the category of subject and attribute?

*Or,*

Should logic try to account for the fact of error?

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—DR. R. DAS, M.A., PH.D.*

*Answer ANY THREE questions.*

1. State clearly what you understand by the principle of induction. Discuss whether it can be proved or disproved on the basis of experience. On what other basis can we rightly assert anything about what is not experienced?

2. What is a law of nature? Explain as many modern theories about it as you know. What is your own view? Does a natural law ever change or have exceptions?

3. Explain the exact significance of the different laws of thought accepted in traditional logic. Are there any senses in which they can be denied? How are these laws distinguished from the psychological and natural laws?

4. Are affirmation and negation co-ordinate forms of knowing? What is pure negation? If knowledge must be always positive, do we get knowledge in a negative judgment? If we do, what is it that we know?

5. Are there any judgments which are both synthetic and *a priori*? Discuss fully, explaining why you agree with, or differ from, Kant's position on this subject.

## SECOND HALF

*Examiner—MR. A. C. DAS, M.A.*

*ANY THREE of the following questions are to be answered.*

1. There is a distinction between proposition and judgment inasmuch as the former is taken as the linguistic expression of the latter. Discuss with reference to Johnson's view of proposition.

2. 'Discontent both with the traditional and the metaphysical logicians inspired the revolt of the Pragmatists.' (*Stebbing*.) Discuss.

3. Dialectic is often described as the method of deducing categories. Show how far this is true of the Hegelian Dialectic.

4. Show how Kant's attempted deduction of categories inspired the analysis of categories by Fichte and Hegel.

5. Bring out the fundamental characteristic of the mathematical logic in contradistinction from that of the idealistic logic of modern times.

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**(Ethics.)****FIRST PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. A. M. RAY, M.A.**Answer ANY THREE questions.*

1. Summarize briefly Sidgwick's criticism of Common-sense Morality with special reference to the maxim of Benevolence.
2. Explain and examine the relation of pleasure to desire as conceived by Mill, Green, and Sidgwick respectively.
3. Discuss Sidgwick's views as to the mutual relations of Intuitionism, Egoism, and Utilitarianism.
4. Explain Spencer's distinction between Absolute and Relative Ethics. Discuss the importance of Evolutional Ethics as an explanation of moral facts.
5. Estimate the value of Utilitarianism as a moral theory with special reference to the views of Sidgwick and Green.

*Or,*

Give a critical estimate of Kant's ethical system with special reference to the following:—

- (a) The good will.
- (b) The categorical imperative.

**SECOND HALF***Examiner—PROF. K. N. MITTER RAI BAHADUR, M.A.**Answer ANY THREE questions.*

1. Give a critical estimate of Kant's System of Ethics with special reference to the problem of the freedom of will.
  2. Explain the character and course of moral progress. How far is moral progress conditioned by the historical progress of humanity?
  3. Discuss the mutual relation of the Family, the Society, and the State, with reference to the moral development of the individual.
  4. What is the summum bonum? Give a critical exposition of the views of Kant, Green, and Sidgwick on this question.
  5. The conception of virtue varies with different times and places. Examine this statement, and illustrate your answer by taking Justice for example.
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## SECOND PAPER

*The questions are of equal value.*

*Attempt ANY THREE questions from EACH half.*

## FIRST HALF

*Examinee*—DR. M. N. SARKAR, M.A., PH.D.

1. Explain, after Green, the relation between the spiritual principle in Man and the spiritual principle in Nature. Indicate the bearing of this relation on Green's ethical conception.

2. What, according to Green, is the ancient conception of Virtue? How does it differ from the modern conception? Illustrate your answer.

3. 'My point is that good is a simple notion, just as yellow is a simple notion.' (*Moore.*) Explain and examine.

4. Develop, after Kant, his principles of Ethics from the conception of Moral Law. 'Kant's assertion of the Autonomy of the Practical Reason . . . makes his Ethics ultimately and hopelessly heteronomous.' (*Moore.*) Do you agree?

5. Is it possible to build up moral life without the notion and implication of God? Fully discuss the question.

## SECOND HALF

*Examiner*—PROF. A. N. MOOKERJEE, M.A., PH.D.

1. Explain the precise meaning of the expression 'Social Self-consciousness', indicating the factors which bring about its formation and development.

2. Explain and compare Social Composition and Social Constitution.

3. *Either,*

Write a critical note on the fact and nature of Social Progress, explaining the criteria by which progress may be estimated.

*Or,*

Write a critical note on the nature and stages of Civilization, noticing its different stages or types.

4. Write explanatory notes on the following:—

(a) The Religious-Proprietary Family.

(b) The Romantic Family.

(c) The Ethical Family.

5. Explain the importance of Association and Imitation as factors of social evolution.

**(Philosophy of Religion.)****FIRST PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. B. N. RAY, M.A.**Answer ANY THREE questions.*

1. Describe the relation between Philosophy and Religion, commenting on the principal views which have been held on the point.
2. Analyze the religious consciousness, and explain its principal forms, showing how they are related to one another.
3. What is the nature of the feeling of the Numinous? Discuss how far it is adequate to establish the God of Religion.
4. Examine fully the value of dogmas. Discuss the view that an agreement with the literal content of dogmas should not be required for any one who would join a religious communion.
5. Explain and examine the theory of Mysticism.

**SECOND HALF***Examiner—DR. S. K. DAS, M.A., PH.D.**Answer ANY THREE questions.*

1. Indicate carefully the landmarks in the evolution of the idea of God, and formulate your own idea of God on the basis of such evolutionary history.
  2. Attempt a critical estimate of the Cosmological proof for the existence of God, particularly in its 'moral form'. What is the religious motive behind this proof?
  3. On what grounds is 'the unity of God as Cause and God as Perfection' maintained? Elucidate the attributes implicit herein.
  4. What is the essence of Personality? Show how God may be personal yet not finite.
  5. 'God and the spirits are the Absolute—not God alone. Together they form a Unity, but that Unity is not the unity of self-consciousness.' Expound fully this view, with Eastern as well as Western parallels.
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## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—PROF. W. S. URQUHART, M.A., D.LIT., D.D., D.L.

*Answer ANY THREE questions.*

1. If, in your religious thinking, you had to choose between emphasis on Immanence and emphasis upon Transcendence, which emphasis would you choose?

2. What do you consider the idea of Creation is chiefly intended to express?

3. Estimate the philosophical value of the conception of the Miraculous.

4. Can you show that the value of a belief in Incarnation must be proportional to a sense of the reality of the historical?

5. If the relation between the individual and the universal is described as one of identity, can sufficient permanent importance be assigned to the individual?

## SECOND HALF

*Examiner*—DR. S. C. CHATTERJEE, M.A., PH.D.

*Answer ANY THREE questions.*

1. 'Time and Eternity are contraries that cannot both be true of God.'

'Time and Eternity are complementaries that constitute the whole truth about God.'

Examine the views expressed in the above statements, and give reasons for your own view of the matter.

2. Discuss the question of freedom in the light of a psychological analysis of will, and show how the result of your discussion bears on the problem of reconciling man's freedom with God's sovereignty.

3. 'Sufferings have a greater value for our spiritual development than the pleasures of life.'

Examine the truth of this statement, and explain your own way of solving the problem of evil and suffering.

4. Examine the grounds of the belief in the law of *karma*, and discuss the relation of God to this law.

5. 'Eternal life must be an eternally accomplished reality, else it will not be eternal.'

Discuss the truth of this statement, and bring out its implications for the Indian and Western theories of Eternal life.

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## (Nyāya-Vaiśeṣika)

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. KOKILESWAR BHATTACHARYYA SASTRI, M.A.*Attempt ANY THREE questions.*

1. What do you understand by the relation of Samavāya ( समवय ) ? Explain this relation with illustrations. Show also the necessity for the introduction of this relation in the Nyāya system.

2. What are Nirvikalpa ( simple ) and Savikalpa ( complex ) stages of Perception ? Has the Savikalpa form any direct bearing upon the theory of 'error' as held in Nyāya ?

3. What, according to Nyāya-Vaiśeṣika, are the six attributes of the Self, and how would you classify them according to modern Psychology ? How is it that the soul when it reaches the final goal is considered as losing even consciousness of itself making no difference between soul and matter ? Discuss the latter point.

4. Give the nature of the Nyāya arguments for the existence of God.

5. Sense-object contact ( sannikarṣa ) is not an essential and universal character of all perceptions. Discuss this.

## SECOND HALF

*Examiner*—DR. S. C. CHATTERJEE, M.A., PH.D.*Answer ANY THREE questions.*

1. 'Pramāṇato'rthapratipattau pravṛttisāmarthyādarthavat pramāṇam.'

Explain this statement, and discuss the theory of truth implied by it.

2. Explain the nature of non-existence (abhāva), and discuss the different ways of explaining our knowledge of non-existence.

3. Discuss the theory of *pakṣatā* as a condition of inference with reference to the Siddhāntamuktāvali on *kārikā* 70.

4. Distinguish between the Nyāya and the Vedānta views of *upamāna*. Can the Naiyāyika's *upamāna* be reduced to analogy or any other type of knowledge ?

5. What do you understand by a word (*pada*) and its meaning ? Is the primary meaning (*śakti*) of a word constituted solely by the individual (*vyakti*), or the form (*ākṛti*), or the universal (*jāti*) ?

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. SUSILKUMAR MAITRA, M.A., PH.D.

*Answer ANY THREE questions.*

1. What is a *padārtha*? How many kinds of *padārthas* are recognized by the Vaiśeṣikas, and why?
2. Distinguish between a *guṇa* and a *sāmānya*? Are there higher and lower universals? If so, in what sense?
3. Define *viśeṣa*, and explain and illustrate your definition clearly.
4. Distinguish between *samhyoga* and *samavāya*. How is *abhāva* (absence) related to its *adhikaraṇa* (the location of the absence)?
5. The last three *padārthas* (universal, individuality, and inherence) do not exist in the sense in which the first three (substance, quality, and action) do. Explain and discuss.

## SECOND HALF

*Examiner*—DR. SUSILKUMAR MAITRA, M.A., PH.D.

*Answer ANY THREE questions.*

1. Discuss the following:—
  - (a) *Buddhi* is synonymous with *jñāna* and is a quality of the Ātman.
  - (b) *Buddhi* is a *pariṇāma* of *Prakṛti*.
2. Explain the antitheistic objections to the Vaiśeṣika theistic argument, and give your own estimate of these.
3. State and explain the four kinds of *avidyā* or non-valid cognition, and give examples of each.
4. Distinguish between the Nyāya and the Vaiśeṣika views of *smṛti* as a form of cognition? Which of these do you accept, and why?
5. Analyze dream-consciousness, and give your own estimate of the Vaiśeṣika view of dream-cognitions.

## Sāṃkhya-Yoga

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. KOKILESWAR BHATTACHARYYA SASTRI, M.A.

*Attempt ANY THREE questions.*

1. What is अज्ञ according to the Sāṃkhya, and how does the Sāṃkhya-kāra explain the necessity for its introduction into his system?

In the theory of perception, the coincidence of the *बुद्धि* and the object according to Sāṃkhya, and the *सुन्निकर्ष* (contact) between the object and the organ according to Nyāya-Vaiśeṣika,—are necessary. Are the coincidence and the contact the same thing? Give reasons for your answer, and show their agreement or difference with or from the Western theory of the stimulation by the object of the sense-organ in perception.

2. Describe the Sāṃkhya theory of evolution. What are *प्रकृति-विकृतिः*, and what are known as *कैवल्य-विकृतिः*?

3. In what respects do the *व्यक्त*s agree with *अव्यक्त*, and also how the former differ from the latter? In this *Kārikā*, the last line runs thus—‘तद्विपरीतस्तथा च पुमान्’. Here, give the significance of the term *तथा च*. Does not this part of the *Kārikā* tell us that *पुरुष* is *एक* (one) contrary to the Sāṃkhya-view on the multiplicity of *पुरुष*?

Discuss this point and give your own view.

4. How to get rid of the ‘error’ as explained by the Sāṃkhya? When the error vanishes, what is left over is the real nature of the *पुरुष*. How does *पुरुष* differ from *another* in this condition? With this, how would you reconcile the view of the *Kārikā* on the multiplicity of *पुरुष*?

## SECOND HALF

Examiner—DR. N. K. BRAHMA, M.A., PH.D.

Answer ANY THREE questions.

1. Clearly explain the Sāṃkhya theory of salvation, and point out its differences with the Vedāntic theory.

2. Explain fully the *Satkāryavāda* of the Sāṃkhya system, with special reference to the aphorism—*अविशिषाविशिषारम्भः*.

3. Discuss critically the merits and demerits of the Sāṃkhya doctrine of a plurality of *Puruṣas*.

4. How does the Sāṃkhya-Pravacana-Bhāṣya refute the Absolute Monism of Śaṅkara?

5. Can you point out the innovations which Vijñāna Bhikṣu introduces into the orthodox Sāṃkhya system?

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—PROF. S. KUPPUSWAMI SASTRI, M.A.

N.B.—Answer Question 6 and ANY TWO of the rest.

1. Determine the place of the *Sāṅkhya-Yoga* in the development of Indian philosophical thought, with particular reference to its relation to the other *darsanas* and to the *Upaniṣads*.

2. Maintain that the *Sāṅkhya* and the *Yoga* are *Samānatāntaras*, by a clear and full exposition of their common and distinctive features.

3. Discuss the metaphysical significance and soundness of the *Sāṅkhya-Yoga* conception of the relation between the *Puruṣa* and the *Prakṛti*, with special reference to the ideas explicitly and implicitly conveyed in the following extract :—

“पञ्चगव्यवदुभयोरपि संयोगस्तत्कृतश्चरः”

4. (a) Make clear and comment upon the attitude of the *Yoga* system towards the subject-matter of what is termed Psychology.

(b) Write a note on the nature and value of the scheme of ‘*Psychic Katharsis*’, which is laid down in Patañjali’s *Yoga-sūtra*.

5. Give a critical exposition of the nature and relation of the *cosmic* and *individual* aspects of the thirteen *tattvas* from *Mahat* onwards in the evolutionary scheme of the *Sāṅkhya*.

6. Render the following intelligible in appropriate expository notes :—

(a) लिङ्गम् ।

(b) इत्ययः ।

(c) पञ्च विपर्ययभेदाः ।

(d) नर्माणकायाः ।

(e) चल' गुणवृत्तम् ।

(f) शान्तिदिताव्यपदेशधर्मावुपाती धर्मी ।

## SECOND HALF.

*Examiner*—DR. M. N. SARKAR, M.A., PH.D.

THREE questions are to be answered, of which the FIRST must be one.

1. Develop fully Patañjali’s conception of *Īśvara*. Do you consider the introduction of the conception of *Īśvara* an improvement upon *Sāṅkhya* from philosophic view-point? If so, why?

2. How does *Sāṅkhya* establish the multiplicity of *Puruṣas* and reconcile it with the unity of experience?

3. Distinguish between *Saṃprajñata* and *Asaṃprajñata* *Samādhi*. Indicate the special forms of the former, explaining their specific cognitive values.

4. Explain, after Vyasa, Vācaspati, and Vijñānabhikṣu, the nature of *Samjoga* between *Puruṣa* and *Prakṛti*, and determine after them its cause.

5. Analyze fully after Sāṅkhya and Yoga the process of perception. In this connection determine after Vācaspati and Vijñānabhikṣu the exact function of *Puruṣa* and *Buddhi* and the nature of their relation in perception.

6. Explain the following with expository notes :—

- (a) *Karmāśraya*.
- (b) *Gūṇa-Parvaṃ*.
- (c) *Akhyāti-vāda*.
- (d) *Prāntabhūmi prajñā*.

(Vedānta.)

### FIRST PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—MR. KOKILESWAR BHATTACHARYYA SASTRI, M.A.

*Attempt ANY THREE questions.*

1. How does the Śaṅkara-Vedānta account for the interaction between the psychical principle ( चक्षुः ) and the physical apparatus, viz. the internal organ,—the former being the passive observer and the latter extraneous ?

How is the distinction made in this system between the *Sākṣin* ( साक्षी ) and the *Jīva* ( जीव ) ?

Or,

What kind of relation is conceived by Śaṅkara between the Empirical ( भ्रुक्षित ) and the Apparent ( रजत ) objects ?

'The silver is described as चक्षुः with reference to the shell.' Explain this relation with the help of the Aphorism—"तदनन्तमरन्ध्रशब्दादिभ्यः"।

2. Is the Empirical self regarded as simple or of complex character ? Show that this question has an important bearing on the Vedāntic theory of *Error*.

3. "आनन्दमयीभ्यासात्"—

Show that this Aphorism admits of two different interpretations, and show also that the 'Absolute monism' of Śaṅkara and the 'Qualified monism' of Rāmānuja are to be traced to this difference of interpretations.

4. Fully explain :—

“देहादिव्यतिरिक्तात्मासित्वादिनां देहदावहप्रत्ययो निष्येव, न गोणः” ।

Or,

Give the sense of Śaṅkara's reply to the following objection raised by his opponent :—

“नक्षत्राणि न मुख्यं सर्वज्ञत्वमुपपद्यते । नित्यज्ञानक्रियत्वे ज्ञानक्रियां प्रति स्वातन्त्र्यासम्भवात्” ।

5. Write a few lines about the Vedāntic conception of evil and the means laid down for its eradication.

## SECOND HALF

Examiner—DR. S. K. DAS, M.A., PH.D.

Only THREE questions are to be attempted.

1. Define clearly, with Western parallels, if possible, the attitude of Śaṅkara in relation to the conflicting claims of Revelation (*Śruti*) and Reason (*Tarka*) as advanced by rival schools of Indian thought.

2. Formulate the argument whereby Śaṅkara arrives at the conclusion :—

“तस्मात् कारणस्यात्मभूता शक्तिः शक्तिश्चात्मभूतं कार्यम्” ।

Bring out in this connection the precise significance of the category of *ananytvam* ( अनन्यत्वम् ) employed by the *Sūtrakāra*.

3. How does Śaṅkara account for the origin of evil, and square his belief in distinction ( भेदः ) between *Jīva* and *Brahman* with his belief in the essential unity ( अमेदः ) between them ?

4. Explain and examine the cogency of the method by which Śaṅkara seeks to escape from the horns of the dilemma, besetting the creative act of *Īvara*.

5. Develop, with critical comments, the argument contained in the following extract :—

“ न तु निरपेक्षस्य निर्मादत्वमस्ति । सापेक्षी ईश्वरो विषयां सृष्टिं निर्दिशतीति । किमपेक्षत इति चेत्, धर्माधर्मोपपेक्षत इति वदामः । अतः सृज्यमानप्राणिधर्मोपेक्षा विषयां सृष्टिरिति नायमीश्वरस्यापराधः । ईश्वरस्य परम्यन्वद्वैदव्यः” ।

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. D. M. DATTA, M.A., PH.D.

*Answer ANY THREE questions.*

1. Give a general definition of perception, and discuss fully if an *indriya* is essentially necessary for every perception.
2. Can time be immediately known? If so, how? How do you distinguish between memory and repeated perception?
3. Critically consider the *advaita* theory of illusory perception, and show how far it is compatible with their theory of veridical perception.
4. What is bliss (*ānanda*)? How do you reconcile the statements, 'Brahman is bliss', 'Liberation is bliss'?
5. Explain, with examples, the *advaita* conception of *arthāpatti*, and consider whether it is not a form of inference.

## SECOND HALF

*Examiner*—MR. K. C. BHATTACHARYYA, M.A.

*Answer ANY THREE questions.*

1. What are the chief objections of the Vedānta-sūtras against the Sāṃkhya? Clearly indicate the lines of argument employed by the Vedānta-sūtras to discredit the Sāṃkhya.
  2. Enumerate and explain the main points of difference between Śaṅkara and Rāmānuja as commentators of the Vedānta-sūtras.
  3. How does Rāmānuja prove that the finite soul is not and can never be identical with Brahman?
  4. We see a snake where there is only a rope. How would Śaṅkara and Rāmānuja account for this phenomenon? Fully bring out the difference of view between these two thinkers in this connection.
  5. 'The world is the body of Brahman who is the soul of it.' Fully bring out the implications of this dictum, with special reference to Rāmānuja. What is the theory of creation implied in it? Can this theory be differentiated from Pantheism?
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**(Translation)****FIRST PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. KOKILESWAR BHATTACHARYYA SASTRI, M.A.**Attempt ANY THREE questions.*

1. Show by comparative discussion that Śaṅkara's view of Causation is different from both the Parīṇāma-vāda and the Ārambha-vāda, and his doctrine is also to be distinguished from the Sūnya-vāda of the Mādhyamika.

2. Examine and discuss the following position :—

'Although Śaṅkara describes Brahman as Nirguṇa and therefore as indefinable and unknowable, it does not follow that the Nirguṇa Brahman is a blank ; for negation necessarily has its own positive implication.'

Substantiate your arguments by quotations from the text, if possible.

3. Show, by reference to the Bhāṣya bearing on the points, that both the jīva and the world cannot be regarded as identically the same as Brahman, nor can they be taken as something other than ( अथ ) Brahman.

4. Discuss how in Vedānta the idea of God is not presented as something merely external to us, but as something that runs through all and holds them together.

5. Write a few lines about the Vedāntic conception of Evil and the means laid down for its eradication.

**SECOND HALF***Examiner—DR. SUSILKUMAR MAITRA, M.A., PH.D.**Answer ANY THREE questions.*

1. '(Brahman can) not (be the cause of the world) on account of the difference of character of that (viz. the world).' Explain and discuss.

2. Distinguish between Śaṅkarite Idealism and Vijñānavādi Phenomenalism. Give the substance of Śaṅkara's criticism of the latter.

3. Explain the Sāṅkhya theory of Pradhāna as the material cause of the world, and discuss Śaṅkara's objections to the theory.

4. Sāṅkhya realism stripped of its inherent inconsistencies merges into Śaṅkarite Idealism. Explain and discuss.

5. Give your own estimate of Śaṅkara's criticism of the Vaiśeṣika metaphysic.



## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. R. DAS, M.A., PH.D.

*Answer ANY THREE questions.*

1. Explain in modern terms the theory of knowledge advocated in the Sāṃkhya system. Where and how, if at all, does knowledge occur ?
2. How does Vācaspati prove the theory of *Satkāryavāda* ? What other theories of causality are found in Indian Philosophy ? Which of them do you accept ? Give reasons for your answer.
3. Explain the Sāṃkhya theory of bondage and freedom. What exactly is *aviveka* ( non-discrimination ) ? Does it belong to *puruṣa* or to *prakṛti* ? Has it any beginning ? How do we know that it can be removed ?
4. Discuss fully the nature of the *guṇas*. How are they related to *prakṛti* ? Describe the specific characteristics of the different kinds of *guṇas*. How is a combination of them intelligible ?
5. Explain the Sāṃkhya view of the phenomenal object, and compare it with the Kantian view. Do we have a common world ? If we do, how do you account for it ?

## SECOND HALF

*Examiner*—MR. U. C. BHATTACHARYYA, M.A.

*Attempt ANY THREE questions.*

1. 'The Absolute (Brahma) cannot be known by preception or by inference but only by *Śabda* or testimony.' Discuss this dictum. Is it equivalent to the theory that the ultimate reality is 'unknown and unknowable' ?
2. (i) *Pradhāna* is the cause of the world.  
(ii) *Brahma* is the cause of the world.  
State and explain the arguments for and against these propositions. Can you think of any reconciliation between them ?
3. Analyze your experience when you say 'I perceive a picture'. Does it prove the reality of yourself as a subject and the picture as an object.
4. I am not aware of the non-existence (*abhāva*) of consciousness. Therefore, consciousness is without a beginning and without an end.  
Examine this reasoning. What are the different forms of non-existence (*abhāva*) ?
5. Can we think of anything that is neither existent nor non-existent ? What arguments can you advance in support of such a theory, and how would Rāmānuja refute them ?

**(Essay)****EIGHTH PAPER***Examiner*—PROF. A. N. MOOKERJEE, M.A., PH.D.Write an essay on *one* of the following subjects:—

- (a) Fruitfulness of Psycho-Physics in Psychological studies.
  - (b) The theory of Universals.
  - (c) The theory of Relations, external and internal.
  - (d) The Problem of Perception in New Realism.
  - (e) Metaphysical Foundation of Ethics.
  - (f) The doctrine of Evolution which best explains the facts of experience.
  - (g) The treatment of the category of Causality in European Philosophy.
  - (h) The treatment of the conception of God in Indian Philosophy.
  - (i) A discussion as to which of the faculties of the human mind—Reason, Will, and Feeling—can penetrate into the core of Reality.
  - (j) The philosophical basis of the belief in a Future Life.
  - (k) Validity of Knowledge in Indian and in European Philosophy.
  - (l) The doctrine of Atomism in Indian and European Philosophy.
  - (m) Civilization: its types and stages; its advantages and disadvantages; its progress and its criteria.
- 

**COMPARATIVE PHILOLOGY****FIRST PAPER***Examiner*—MR. K. C. CHATTERJEE, M.A.*The figures in the margin indicate full marks.**Answer Question I and ANY FIVE of the remainder.*

1. Mention the chief lines along which words change their meanings. Try and give some detailed scheme of classifying the various types of Semantic change. Give examples from either English or any of the languages of India. 20
2. How are languages classified into various 'families'? What are the chief criteria for such a classification? Describe in some detail the chief characteristics of *either* the 'Chinese family' *or* of the 'Semitic family' of languages. 16
3. Write what you know about *any four* of the following:— 16  
Basque, Japanese, Arabic, Tamil, Dardic, Pahlavi.
4. Write a note on the Junggrammatiker. Who were the founders of this school of philology, and how far did they influence the study of linguistics? 16
5. Discuss the importance of Bopadeva and of Bhaṭṭaji Dikshita for Sanskrit Grammar. 16

6. How were the methods of modern linguistics introduced into India? Whom would you regard as the pioneers of these new methods? Discuss the present day condition of linguistic studies in India. 16

7. Write what you know of the influence of geographical environment on the growth of languages. Does the *history* of a people leave any marks on the development of a language? Illustrate your answer with examples drawn from the languages you know. 16

8. Discuss the statement that the ultimate form in the development of a language is 'analytical'. Would you regard Bengali as analytical? If so, in what degree? 16

## SECOND PAPER

*Examiner—MR. S. SEN, M.A.*

*The questions are of equal value.*

*Attempt any SIX questions.*

1. Describe the organs of speech, and illustrate the same with a suitable diagram. 'Breath is the life of human speech as it is of human existence.' Explain.

2. What do you mean by the phonetic alphabet? Give the phonetic symbols for the 38 ordinary sounds of Standard English with illustrative key-words for each sound.

3. Classify the English consonants, and include them all in a chart prepared for the purpose. Mention some of the more important Indian consonantal sounds that are not in the chart of English consonants.

4. Classify the vowels of your mother-tongue, and give a chart to illustrate them. Draw diagrams to illustrate the mouth position for the different vowels.

5. Explain the term Assimilation, and classify the various types of Assimilation with suitable examples from your mother-tongue to illustrate the types. Indicate what important part it plays in the progress of Language in general. Exemplify Dissimilation and Assibilation.

6. Transcribe *any three* of the following extracts into the phonetic script:—

(a) Jack and Jill went up the hill,  
To fetch a pail of water.  
Jack fell down and broke his crown  
And Jill came tumbling after.

(b) The day before yesterday I saw a man in his garden, walking up and down. He had huge horny hands and seemed scarcely to know what to do with them.

(c) সে দিন রাজগৃহ উৎসবম্ভর। রাজপথে সহস্র সহস্র নগরবাসী  
উৎসবের বেশে গমনাগমন করিতেছে। রাজগৃহের প্রতি ভবনে উৎসবের লক্ষণ  
বিস্তারিত রহিয়াছে।

- (d) ঐ দেখ মা, গাঁয়ের পথে লোক নেইক মোটে ;  
 রাখাল ছেলে সকাল করে' ফিরেছে আজ গোঠে ।  
 আজকে দেখ রাত হ'ল যে দিন না যেতে যেতে,  
 কুশাণেরা বসে' আছে দাওয়ায় মাদুর পেতে ।

7. State and explain a theory on the formation of the Alphabet for which Sir W. M. Flinders Petrie is renowned.

8. Explain *five* of the following terms:—

Quipu, Wampum beads, pictogram, hieroglyph, ideogram, Cuneiform, Vatteluttu, Nsibidi, Brāhmī, and Kharoṣṭhī.

9. Write a note on the Ancient Home of the I.E.-speaking peoples, discussing the various theories advanced.

10. Reconstruct the following sentences into Primitive Indo-European forms:—

- (i) Tasya āśu-gatir āśvas taṃ v +hati. (Sanskrit.)  
 (ii) Gān geye nā beye ke jāy pāre ? (Bengali.)  
 (iii) My son spied two wolves. (English.)

### THIRD PAPER

*Examiner*—MR. K. C. CHATTERJEE, M.A.

*The figures in the margin indicate full marks.*

*Answer Question I and ANY FIVE of the rest.*

1. Is it right to suppose that Sanskrit is in every respect the most antique in form among Indo-European languages? Fully discuss the question in the light of comparative grammar. 20

*Or,*

Give a general history of the Sanskrit language from the Vedic age down to the time of Bāṇabhaṭṭa. 20

2. What is the justification for believing in the existence of a series of labiovelars in primitive Indo-European? How are they treated in Sanskrit, Greek, and Latin? 16

3. Write a full note on the origin of the cerebrals in Sanskrit, taking into account the statements of the Sanskrit grammarians, parallels from the Prakrits and other Indo-European languages and the Dravidian hypothesis. 16

4. Write a note on the so-called Prakritisms in the Vedas. How will you explain them? 16

5. Give a history of the dual number in primitive Indo-European in Sanskrit and in Greek and other Indo-European languages. 16

6. Write a historical and comparative note on the declension of যুগ্মদ্ব . 16

7. Give an account of the use of the *augment* in verbal conjugation in Indo-European languages. Under what circumstances is it dropped in Vedic and classical Sanskrit? 16

8. Discuss Pāṇini's classification of the conjugations of Sanskrit verbs in the light of comparative grammar. Why is it that there is no *guṇa* of the root vowel in the तुदादि conjugation, as is भ्वादि ? 16

9. How were comparatives formed in primitive Indo-European and in Sanskrit? Give *four* instances from Sanskrit and *four* from other Indo-European languages of comparatives formed from stems different from the positive. 16

10. Write notes on the underlined words in the following:— 16

(a) देवा ह वै यज्ञं तन्वानाः तेऽसुररक्षसेभ्य आसङ्गाद्विभयाच्चतुः ।

(b) सत्यान्न प्रमदितव्यं भुव्य न प्रमदितव्यम् ।

(c) तत्सव्यं सु आत्मा तत्सुमसि श्वेतकेतो ।

(d) तं पातयां प्रथममास पपात पयात् ।

(e) कृताः श्रव्यं हरिणा तवासराः ।

(f) नतानुपातं कुसुमान्धगृह्णात ।

(g) रघव्यं वामनं दृष्ट्वा पनजेन्म न विदधाते ।

(h) गन्तुकामा वयम् ।

#### FOURTH PAPER

(Pāli-Prākṛit.)

Examiner—PROF. VIDHUSEKHAR BHATTACHARJI, SHASTRI

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Give a short history of the Indo-Aryan languages, period by period, from the Vedic period down to the period of Modern Vernaculars.

2. Characterize the general nature of the linguistic break-up of OIA which give rise to the various MIA dialects.

3. What do you think about the origin of the Gāthā language? Name at least one work in which this language has been used, and quote or refer to some expressions as example.

4. Identify the language of the following extracts, and translate one of them into Sanskrit and English:—

(a) Śutanukā nāma devadāsikyī  
taṃ Kāmayittha Bālānaśēye  
DĒVADINNĒ nāma lūpaddakkhe.

- (b) Vijayappamukhā sabbe taṃ upecca apucchisum ;  
'Ayaṃ bho ko nu dipo ?' ti. 'Laṅkādipo' ti abruvi.  
'na ettha santi manujā, na ca hessati vo bhayaṃ'.....  
iti vatvā kuṇḍikāyaṃ te jalena nisiñciya  
suttañ ca tesāṃ hatthesu laggetvā nabhasāgamā,  
dassesī soṇirūpeṇa paricārīka-yakkhinī.

(c) Vennāyade payare Maṇḍio nāma tuppāo para-davvaharaṇappasatto  
āsī. So ya duṭṭha-gaṇḍo mi-tti jāne pagāsento jāṇu-deseṇa piṇṇam eva addā-  
vāleṇa-litteṇa baddha-vaṇa-paṭṭo rāya magge tuppāga-sippam uvajivai.

5. Explain the terms Assimilation, Dissimilation, Prothesis, Epenthesis, samprasāraṇa, viprakarṣa, aspiration and cerebralization, and illustrate them with examples from MIA and NIA languages.

6. (a) What MIA vowels correspond to the r-vowel of Sanskrit ? Give suitable examples.

(b) Explain, with suitable examples, how the three different consonants *kh*, *ch*, and *jh* became in MIA the equivalents of OIA *kṣ*.

7. Explain phonetically *any five* of the following sandhis:—

jadatthi, chappi, aṅgamaṅgammī, dhiratthu, naṇḍa, vasantūsaṇḍa,  
gaṇamāi, yadīsaṇḍa, chaccēva, ēkkam-ēkkam, and osamagga.

8. Write etymological notes on *any eight* of the following words:—

chāhī, Bharaho, ghetṭum, sotṭum, dhammā (a juggler), samugga  
(a box), citta-phala, vattī, bāho (tears), pahuttanaṃ, puttakida, jōsaro,  
puttchīm, pauṭṭho, theva, vicchāḍḍa (liberality), and pāusa.

9. Attempt a concise general observation on the Conjugation of the MIA verbs. Conjugate the root *kr* in the present indicative 3rd person singular in Sauraseni; the roots *khād*, *gū*, *chid*, and *vac* in passive 3rd person singular, present indicative in Mahārāṣṭri; and the root *krū* in the past tense 3rd person singular active in Pāli.

10. Characterize in brief some of the main features of the Apabhraṃśa stage of Middle Indo-Aryan.

## SEVENTH PAPER

Examiner—PROF. VIDHUSEKHAR BHATTACHARJI, SHASTRI

*The figures in the margin indicate full marks.*

*Answer the FIRST THREE questions and ANY THREE of the rest.*

1. Translate into English *any three* of the following:— 24

(a) fērā Manyāēibyō rāṇhē vasō-yāitīm vasō-ḥōitīm,  
yāis upairi āya zemā gaobis syentī; nemanhā Aḥāiuzdātā  
paitr avat stuyē.

nōit ahmāt ā zyānīm nōit vivāpēm xētā māzdayasniś  
aoi vīsō; nōit astō nōit uštānahē cinmānī.

- (b) vi nō tbišvatām tbaēšēbiš  
 vi manō bara goamentām,  
 yō ciš-ca ahmi nmāne,  
 yō aišhe visi, yo ahmi zantvō, yō aišhe daišhvō,  
 aēnaṇhā asti mašyō  
 geurvaya-hē pāšave zāvaro  
 pairi-šē uši verēnūdi  
 skēndēm-šē manō kerēnūdi.  
 (c) Sraošem ašim, huraoðem, vərəθrājanem,  
 frādatgaēðem, ašavanem, ašahe ratūm  
 yazamaide,  
 yim caθivārō aurvantō  
 auruša raoχšna frāderesra,  
 spēnta vidvāṇhō asaya,  
 mainivasanṇhō vazēti :  
 srvaēna aēšām safāṇhō  
 zaranya paiti-θwarštāṇhō.  
 (d) θātiy Dārayavauš χšāyaθiya Auramaz-dā-maiy ima  
 χšaθram frābara, Auramazdā-maiy upastām abara, yatā  
 ima χšaθram hamadārayaiy, vašnā Auramazdāha ima  
 χšaθram dārayāmiy.

2. Write notes on *any two* of the following :— 20  
 Haoma, Sraoša, Fravaši, Gaumāta.
3. Write full philological notes on *five* of the following, 20  
 giving equivalents from other languages where possible :—  
 āxtūirīm, hušχwafa, srvara, χraoždīšta, ṇabanazdišta,  
 haiθyēng, ištēe, apərəsaētem.
4. Write a note on the *daēva-* and *ahura-* words in the 12  
 Avesta. Can you cite parallels from other languages you  
 know ?
5. Write notes on *any three* :— 12  
 Aži Dahāka, Kərəsāni, Vištāspa, Jāmāspa, Aēšma.
6. Write notes on the use of the ātmanepada and of the 12  
 augment in the Avesta, and give comparisons from the  
 usage in Vedic Sanskrit.
7. Compare the guṇa- and vṛddhi-vowels in Avesta and 12  
 Sanskrit.
8. Give a Sanskrit rendering of passage (b) in Question 1. 12
9. What is the importance of the Behistun Inscription 12  
 considered (a) historically, and (b) linguistically ?

## EIGHTH PAPER

**Indo-Aryan Branch, Alternative A.**

*Examiner*—DR. BATAKRISHNA GHOSH, PH.D., D.LITT.

*The questions are of equal value.*

*Attempt SIX questions only.*

1. What do you understand by 'three series of gutturals' in the original Indo-European? Discuss their development in the various Indo-European dialects, with particular reference to Sanskrit and Greek.

2. Enumerate the Indo-European dialects, giving the characteristic features of each. How far can Hittite be considered to be an Indo-European dialect?

3. What is Ablaut? Demonstrate the principal Ablaut-series with proper examples.

4. Discuss the *Schwa Indogermanicum* with reference to Indo-European Ablaut-systems, and describe the sounds it has given rise to in Sanskrit, Avestan, Greek, and Germanic.

5. Discuss in detail the older and the later palatal series in Sanskrit.

6. Prove by means of suitable examples that Greek vowel-system is more archaic than Sanskrit vowel-system, but Sanskrit consonant-system is more archaic than Greek consonant-system.

7. Write short notes on the following:—

*sākos, centum, swaīlra, zima, nūpāt, kaēnā, nūglā, aspa, laghū, pisures.*

8. Discuss the chief characteristics of Homeric Greek as distinct from classical Attic.

9. Discuss in detail the laws associated with the names of Verner, Grassmann, Bartholomae, and Brugmann.

## HISTORY

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner*—PROF. SURENDRANATH SEN, M.A., PH.D., B.LIT.(OXON.)

*Answer ANY THREE questions.*

1. Critically discuss the socialistic experiments to remedy the evils of the Industrial Revolution in England during the first two decades after Waterloo.

2. To what extent was Canning's foreign policy a continuation of Castlereagh's?

3. Do you justify Lord Melbourne's attitude towards the Bed Chamber question?



4. Give a critical estimate of Daniel O'Connell's services to his country and community.
5. 'Peel was really a misfit in the party system.' Discuss.

#### SECOND HALF.

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.(LOND.)

*Answer ANY THREE questions.*

6. Fix the responsibility for the Crimean War. Discuss whether it might have been averted, and analyze the true causes of the war.
7. Write a short essay on the Cobden Treaty (1860).
8. 'An international congress: the greatest of all possible Vanity Fairs.' Is this true of the Congress of Berlin?
9. 'The Liberal government of 1880 was a failure and a tragedy.' Discuss.
10. Write a note on the office of the Prime Minister in England during your period.

#### SECOND PAPER

*The questions are of equal value.*

*Only THREE questions to be attempted from EACH half.*

#### FIRST HALF.

*Examiner*—DR. H. C. ROYCHAUDHURI, M.A., PH.D.

1. Comment on *any two* of the following passages:—

(a) Bimbisāra may be regarded as the real founder of the Magadhan imperial power.

(b) The triumphant progress of Alexander from the Himalaya to the sea demonstrated the inherent weakness of the greatest Asiatic armies when confronted with European skill and discipline.

(c) The period during which the Śātavāhanas ruled over Mahārāṣṭra must have been a prosperous one in the history of the country.

(d) There are no real grounds for thinking that the Śakas ever figured as invaders of any part of Northern India above Kāthiāwār and Malwa.

(e) Matrimonial alliances occupy a prominent place in the foreign policy of the Guptas.

(f) Rājyavardhana was allured to confidence by false civilities on the part of the king of Gauda.

(g) A reaction promoted by the Brahmins had sapped the foundations of the Maurya authority and dismembered the empire.

2. Review the career and achievements of Chandragupta Maurya. What are our main sources for the history of his reign? Discuss their credibility.

3. 'Whatsoever exertions I make are for the end that I may discharge my debt to animate beings, and that while I make some happy here, they may in the next world gain heaven.' Did Asoka live up to this ideal?

4. Write a note on India's contact with the outside world in the days of (a) Asoka, (b) Kanishka, (c) Samudragupta, (d) Harsha of Kanauj, (e) Lalitāditya of Kashmir, and (f) Devapala of Bengal.

5. Give a critical account of the political condition of Northern India from 455 to 554 A.D.

6. Discuss the relations of the Pallavas with the Imperial Guptas and the Chalukyas of Vatāpi.

7. Give an account of the rivalry between the kingdoms of Bengal and Kanauj during the period 700 to 900 A.D.

#### SECOND HALF.

*Examiner*—PROF. RAMESHCHANDRA MAJUMDAR, M.A., PH.D.

8. Write a critical note on the different types of polity prevailing in Northern India during the life-time of the Buddha. Refer, in this connection, to the manner in which the proceedings were conducted in the 'mote-hall' of the autonomous clans.

9. The Maurya government has been described as an autocracy tempered by reverence for Brahmins. Do you agree? Give reasons for your answer.

10. Write notes on *any three* of the following :—

- (a) Kingship among the Kathaiaans.
- (b) The *amātya-parisad* in the Śunga period.
- (c) Provincial government in the Scythian epoch.
- (d) District administration in the Gupta Age.
- (e) Choice of kings in the seventh and eighth centuries A.D.
- (f) Slavery in ancient India.

11. What conclusions regarding the position of women in ancient India may be drawn from—

- (a) the manuals on law and polity, and
- (b) genuine historical records of the period 800 B.C. to 650 A.D.?

12. Write a note on cities and urban life in ancient India from the data supplied by (a) the early Buddhist texts, (b) the *Indika* of Megasthenes, (c) the *Periplus* of the Erythraean Sea, and (d) the records of Fa Hien.

13. Write a note on Imperialism in ancient India. Illustrate your answer by concrete examples as far as possible.

14. How far may Kautilya's *Arthasāstra* be regarded as 'a commentary on, and exposition of, the notes recorded by the Greek observers'?

## THIRD PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner—MR. INDUBHUSIAN BANERJEE, M.A.*

*THREE questions to be attempted.*

1. Comment on *any three* of the following:—

(a) 'I show thee the land upside down ; that happens which never happened before. Men shall take up weapons of war ; the land lives in uproar. All good things have departed. Things made are as though they had never been made. The land is diminished, its rulers are multiplied. He removes himself from men.'

(b) 'He restored that which he found ruined ; that which a city had taken from its neighbour ; while he caused city to know its boundary with city, establishing their landmarks like the heavens, distinguishing their waters according to that which was in the writings, investigating according to that which was of old, because he so greatly loved justice.'

(c) 'Southern boundary made in the year eight, in order to prevent that any negro should cross it by water or by land, with a ship, or any herds of the negroes ; except a negro who shall cross it to do trading or with a commission.'

(d) 'As long as ships were upon the sea, the strong arm of the king occupied Naharin and Kash, but now the Khabiri are occupying the king's cities. There remains not one prince to my lord, the king, every one is ruined. Let the king take care of his land and let him send troops.'

(e) 'If the ruler of Egypt were the owner of my property and I were also his servant, he would not send silver and gold, saying, "Do the commandment of Amon!" It was not the payment of tribute which they exacted of my father. As for me, I am myself neither thy servant, nor am I the servant of him who sent thee.'

(f) 'Now behold, thou trustest upon the staff of this bruised reed, even upon Egypt ; whereon if a man lean it will go into his hand and pierce it ; so is Pharaoh King of Egypt unto all that trust on him.'

2. Write a critical sketch of the civilisation of the 'Age of the Pyramids', indicating the sources of information on which you would rely.

3. 'The task of building up a State, which confronted Ahmose I, differed materially from the reorganization accomplished at the beginning of the Twelfth Dynasty by Amenemhet I.' Explain the above statement, and show how the differences, in each case, determined the character of the restoration.

4. Write a note on the Tell-el-Amarna Letters. To what extent are we justified in regarding 'the Amarna Age' as a well-defined landmark in the ancient history of the Near East?

5. 'Assyria was never dealing with a first class power in her conquest of Egypt, when the unhappy Nile-dwellers were without a strong ruler ; and for such a ruler they looked in vain during the supremacy of the inglorious Ethiopians.'

Explain and comment.

6. Discuss *any two* of the following:—

(a) The democratisation of the hereafter.

(b) The origin of the Hyksos.

(c) The feud of the Thutmosids.

(d) The Aton-hymn of Ikhnaton.

## SECOND HALF.

*Examiner*—MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

*Attempt ANY THREE questions from this half.*

1. Comment on *any three* of the following :—

(a) And it came to pass, as he was worshipping in the house of Nisroch, his god, that Achammelech and Sharezer, his sons smote him with the sword, and they escaped into the land of Armenia. And Esarhaddon reigned.

(b) 'The city and the houses from foundation to the roof, I destroyed them, I demolished them, I burnt them with fire, walls, gateways, sacred chapels, and the towns, I laid them all low and cast them into the Arakhtu.'

(Sennacherib: the *Bavian inscription*.)

(c) 'Behold upon the mountains, the feet of him that bringeth good tidings . . . the noise of the whip and the noise of the rattling wheels ; and prancing horses and jumping chariots, the horsemen mounting and the flashing sword and the glittering spear, and a multitude of slain, and a great heap of corpses, and there is no end of corpses.' (*Nahum*.)

(d) 'O Ninib! mighty god, warrior, ruler of Anunaki, controller of the night,

Judge of all things, who shuts the door of darkness who dissipates obscurity.'

2. What light does the code of Hammurabi throw on the social conditions of Babylonia?

3. Write notes on *any four* of the following :—

(a) The Sumerians.

(b) The dynasties of Berossus.

(c) The tablet of Behistun.

(d) The story of the descent of Ishtar into Hades.

(e) Mita of Mushki.

(f) The State of Naramsin.

4. Give an account of the Imperial organization of Persia. How far was it an improvement upon the Assyrian imperial organization?

*Or,*

Discuss the following :—

(a) 'Urartu played a conspicuous part in the politics and history of Western Asia.' (*Hall*.)

(b) 'The collapse of Assyria was the natural and the inevitable result of the history of the Assyrian State.' (*Maspero*.)

5. Give an account of Assyrian imperial policy towards (a) Syria, (b) Babylon, (c) Elam during the reigns of (i) Sargon (722-705 B.C.), (ii) Sennacherib (705-681 B.C.), (iii) Esarhaddon (681-669 B.C.).

*Or,*

Discuss our principal sources of knowledge of the reigns of (i) Ashurbanipal, (ii) Tiglath-pileser IV.

## FOURTH PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner—M. K. ZACHARIAH, M.A.(OXON.)*

*Answer ANY THREE questions.*

1. Estimate the extent to which the Anglo-Saxon institutions of central government survived the Norman conquest.
2. Explain clearly, with examples, the meanings of, and difference between, charter, writ, assize, bill, ordinance, and statute.
3. Trace the history of, and discuss the reasons for, the summons of representatives of the Commons to the Central Council up to 1295.
4. Describe the character and functions of the King's Household in the Middle Ages, and explain its constitutional importance.
5. Account for the 'breakdown of government in the middle of the 15th century.

## SECOND HALF.

*Examiner—MR. TRIPURARI CHAKRABARTI, M.A.*

*Answer ANY THREE questions.*

1. 'Throughout the sixteenth century the monarchy of England was a constitutional monarchy.' Discuss this statement.
2. Explain the rôle of the Judiciary in the constitution during the Tudor period.
3. 'Hallam believed that there was a definite constitution to break, and that the first two Stuarts broke it. In point of fact there were only precedents pointing in different directions.'  
Illustrate and comment upon this statement.
4. The Revolution Settlement, 1689-1701, has been described as not revolutionary but conservative, as little more than a rectification of recent error. How far do you consider such a description adequate?
5. Was George III an unconstitutional monarch in the years 1760-83?

## FIFTH PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner—MR. SATIS CHANDRA CHAKRABARTI, M.A.*

*Only THREE questions are to be attempted.*

1. Comment with special reference to the present political conditions of the world :—  
'The essence of intervention is force' but 'the duty of preserving

international society justifies intervention to bring to an end conduct that imperils the existence of that society.'

2. Discuss the question of the sovereignty of the air.

3. What is meant by State-succession? Examine the effect of the extinction of a State upon its liabilities.

4. Discuss the doctrine of the equality of States in International Law. How far is equality real in practical politics?

5. Write critical notes on *any three* of the following:—

- (a) Condominiums.
- (b) Client States.
- (c) Arbitration treaties.
- (d) Status of a leased territory.
- (e) Position of consuls.
- (f) The doctrine of inalienable allegiance.

#### SECOND HALF.

*Examiner*—DR. NARAYANCHANDRA BANERJEE, M.A. PH.D.

*Only THREE questions are to be attempted.*

1. Discuss the effect of war on contracts.

2. Indicate the extent of a belligerent's right with respect to private enemy property within the jurisdiction of the enemy.

3. 'In the circumstances of modern warfare, since the introduction of mines, submarines, and air-craft, it is evident that the rules of blockade require complete revision.'

Discuss with special reference to the controversies raised on this subject during the last Great War.

4. Trace the history of 'the doctrine of continuous voyage.' What extension did the doctrine receive during the last war?

5. Comment critically on *any two* of the following:—

- (a) *Porter v. Freudenberg*.
- (b) *The Appam*.
- (c) The case of Savarkar.
- (d) *The Exchange*.
- (e) *Wolff v. Oxholm*.

### (History of Islam)

#### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—MR. A. F. M. ABDUL KADIR, M.A.

*Answer ANY THREE questions.*

1. Give a detailed account of the Caliphate of Abu Bekr, laying stress on the general political and religious conditions that prevailed in Arabia after the prophet.

2. Give a short account of the battle of Karbalā, and discuss its influence on the Islamic solitariness both political and religious.
3. Relate fully the causes of the fall of Umayyads in Spain.
4. Describe the battle of Zallāqa, and discuss fully the career of Ibnī Tashfin.
5. Write short historical notes on *any three* of the following :—
  - (1) Abdur-Rahmān Ibnul Ash 'as, (2) Musa Bin Nusayr, (3) Al-Mukhar, (4) Muhammad Bin Qasim, (5) Abu Muslim Al-Khurasani.

#### SECOND HALF.

*Examiner*—PROF. M. Z. SIDDIQI, M.A., PH.D.(CANTAB).

*Answer ANY THREE questions.*

1. Give the special features of the Abbaside rule differentiating it from that of the first four Caliphs and from that of the Umayyads, and discuss its influence on the political and cultural history of Islam.
2. Give a brief sketch of the rise and fall of the Saljūq dynasty.
3. Describe briefly the career of al-Hakam II of Spain, and compare his character and achievements with those of al-Māmūn of Baghdād.
4. Who were the Fatimides? Determine the place of al-Muiz-lī-Dinillah among them, and describe briefly the services rendered by him and his immediate successor to the history of their dynasty.
5. Write short historical notes on *any three* of :—
  - (a) Hājib al-Manṣūr of Spain.
  - (b) Ṣalāḥ-al-Dīn, the son of Nūr-al-Dīn.
  - (c) Abu Ahmad al-Muwaffaq.
  - (d) The Ismailies.
  - (e) The Berberkides.

#### SEVENTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—MR. K. D. BANERJEE, M.A.

N.B.—*Attempt ANY THREE questions, of which Question 6 must be one.*

1. Explain why the Arabs failed to conquer and hold any considerable part of India proper.
2. Give a brief account of Sultan Mahmud's expedition to Kanauj, and sketch a map to illustrate his advance.

3. Give an account of the second battle of Tarain, and discuss its significance in history.
4. Give an account of the reign of Balban, and offer an estimate of his character.
5. Was Alauddin a great ruler? Give a reasoned answer.
6. 'Firuz Tughlaq is the Akbar of the Turko-Afghan period.' Discuss.

### SECOND HALF.

*Examiner*—MR. D. N. SEN, M.A.

N.B.—*Attempt ANY THREE questions from this half.*

1. 'In a very short period Sher Shah gained the dominion of the country and provided for the safety of the highways, the administration of the government, and the happiness of the soldiery and people.' Amplify.
2. Examine the indebtedness of modern writers of the History of Moghul India to the writings of Abul Fazl and Bernier.
3. Discuss the character of the relations that existed between Akbar and the Portuguese.
4. Give an account of the Revenue System of Akbar, and note the changes introduced in it in the time of Aurangzeb.
5. Describe the situation of Panipath, and explain the decisive character of the three great battles fought there.

## (History of Bengal)

### SIXTH PAPER

*The questions are of equal value.*

*Six questions to be attempted, THREE from EACH half.*

### FIRST HALF.

*Examiner*—MR. INDUBHUSAN BANERJEE, M.A.

1. Critically discuss the circumstances which led to the battle of Plassey. How far was the revolution in Bengal the result of a community of interests between the trading and financial classes of the province?
2. 'Clive, therefore, by crippling the resources of Mir Jafar at the beginning of his administration, cannot be exonerated from the share of the blame for the notorious misgovernment in Bengal that followed.'

*Discuss.*

3. 'I strove as long as possible to remove these disorders by private cautions to the gentlemen concerned ; but finding these means ineffectual, I was obliged to lay them before the Board, where, however, for the most part they met with as little attention.' (*Vansittart.*)

Review critically the disorders that ensued on Mir Qasim's elevation to the throne and the part played by Vansittart therein.



4. Analyze the situation in Bengal at the beginning of Clive's second administration. How far is it true to say that 'Clive made a far from logical use of the excellent opportunity open to him in 1766'?

5. Discuss the significance of, and gradual transformation 'in, the official position of the Nawab of Bengal during the period 1764-1773.

#### SECOND HALF.

*Examiner*—MR. PARESCHANDRA MUKHERJEE, M.A.

6. 'The occupation of Rohilkhand gave to Oudh and to Bengal that permanent protection against the most dangerous of our Indian enemies which it had been the aim of Hastings to secure.' (*Strachey*). Examine the above statement. To what extent, in your opinion, did the end justify the means employed?

7. 'I affirm, as a point incontestable, that the administration of Bengal, distant as it is from the reach of more than general instruction from the source of authority, and liable to daily contingencies, which require both instant decision and a consistency of system, cannot be ruled by a body variable in their succession, discordant in opinion, each jealous of his colleagues, and all united in common interest against their ostensible leader.' (*Hastings*.)

Explain and illustrate.

8. 'The Chief Justice was rich, quiet, and infamous.' (*Macaulay*.)  
How far is this a just characterization of Sir Elijah Impey?

9. Discuss the nature of the financial difficulties that confronted Hastings during the latter half of his administration. How, and with what justification, did he meet them?

10. Discuss any two of the following:—

- (a) The civil suit against Nandakumar.
- (b) Letters of Junius.
- (c) The Amending Act of 1781.

#### SEVENTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—MR. S. K. DATTA, M.A.(OXON.), BAR-AT-LAW.

*Answer ANY THREE questions.*

1. Describe the changes in the status and position of the English in Bengal between 1737 and 1765.

2. How was land revenue administered in Bengal between 1765 and 1772?

3. State what you know about the Amini Report.

4. What provisions were made by Cornwallis for appeals in civil cases?

5. Indicate the steps by which a regular police force was established in Bengal.

#### SECOND HALF.

*Examiner*—PROF. J. P. NEOGI, M.A., PH.D. (LOND.).

*Answer ANY THREE questions.*

1. Describe the reforms made in the system of Muslim criminal law and procedure by Cornwallis.
2. Describe the currency reforms of Clive and Verelst. What were the results of these reforms?
3. State what you know about the economic 'drain' from Bengal between 1757 and 1780.
4. State what you know about the Great Bengal Famine of 1770.
5. Write notes on *any four* of the following :—  
 (a) Talukdars, (b) Abwabs, (c) Jagirs, (d) Mufti, (e) Sonaut rupees, (f) Bank of Hindusthan, (g) Dustucks.

### (Rajput History.)

#### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.

*THREE questions only to be attempted.*

1. Describe briefly the rise, growth, and fall, of the Gurjara-Pra ihāra empire. What different States sprung up out of its ruins?
2. What were the different Cāhamāna families that arose in the different parts of Marwar? How were they related to one another and to the imperial Cāhamāna family of Sambhar and Ajmer?
3. Who in your opinion is the greatest monarch among the Caulukyās (Solaṅkis) of Aṇahilapā aka? Give reasons.
4. What do you know about the Agnikula legend? How did it arise? How far is it supported by epigraphic records?
5. What characteristics of Bhoja of Dhārā make him one of the most interesting personalities in Indian history? Give a brief account of his rivalry with the contemporary Rajput kings of Central and Western India.

#### SECOND HALF.

*Examiner*—DR. N. C. BANERJEE, M.A., PH.D.

*Only THREE questions are to be attempted.*

1. Discuss the method of reconstructing the history of Rajput dynasties. Criticize the value of the Rajput inscriptions (of your period).

2. Sketch the history of the early Cāhamānas of Ajmer-Samblhar, and point out their contribution to Hindu culture.
  3. Sketch the career of Kīrtivarman Cāpdella.
  4. Give an account of the war between Pṛthvīrāja Cāhamāna, and Muhammad Ghori, and account for the collapse of Hindu resistance.
  5. Write critical notes on *any three* of the following:—
    - (1) Administrative machinery of a Rajput State.
    - (2) Turuṣka-dāṇḍa.
    - (3) The Cedis of Ratnapur.
    - (4) The origin of the Caulukyās.
    - (5) Evolution of feudalism in Rajputana.
- 

## SEVENTH PAPER

*The questions are of equal value.*

### FIRST HALF.

*Examiner*—MR. SUBIMAL CHANDRA DATTA, M.A.

N.B.—*Answer ANY THREE questions.*

1. Discuss Smith's views on the origin of the Rathors of Marwar.
2. Give a critical review of the reign of Rāv Chunda of Mandore. Account for its success.
3. Discuss the causes of the struggle between the Rathors of Marwar and Emperor Aurangzeb. What were its consequences?
4. Trace the course of events that led to the triple alliance between Marwar, Mewar, and Jaipur in 1708, and discuss its influence upon the later history of Rajputana.
5. Write critical notes on *any three* of the following:—
  - (i) Bithu inscription of Siha Rathor, (ii) Rāv Mallinath, (iii) Mertia Rathors, (iv) Muhanote Nensi, (v) Durgadas Rathor.

### SECOND HALF

*Examiner*—DR. K. R. QANUNGO, M.A., PH.D.

*Attempt THREE questions only.*

1. Write full critical notes on the *first two* Khumans of the Guhilot dynasty of Mewar.
2. Review the career of Maharana Sangram Singh I (Sanga). What were the causes of his defeat in the battle of Khanwa?
3. Give a critical estimate of Maharana Raj Singh as a soldier and a statesman. Discuss critically the causes of his war with Aurangzeb.
4. Review the policy of the Moghul Emperors towards Mewar during 1556-1658.

5. Comment on *any two* of the following passages :—

(i) 'The story was soon told that Boondi must fall ere the Rana (Lakha of Mewar) could dine. Koombo assembled his brethren of Pahar, declaring that even mock Boondi must be defended.' (*Tod i.*)

(ii) 'He (Maharana Pratap) cursed the name of royalty if only to be enjoyed on such conditions, and he demanded of Akbar a mitigation of his hardships.' (*ibid.*)

(iii) 'Krishna Kumari (the *Virgin Krishna*) was the name of the lovely object, the rivalry for whose hand assembled under the banners of her suitors. . . . not only their native chivalry, but all the predatory powers of India ; and who like Helen of old involved in destruction her own and the rival houses.' (*ibid.*)

## (History of Marathas)

### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—PROF. SURENDRANATH SEN, M.A., PH.D. B.LIT(OXON.).

N.B.—*Attempt ANY THREE questions.*

1. Discuss the nature and estimate the valuation of Bakhars and the Factory Records as materials for the life of Shivaji.

2. Trace the origin of Chowth as disclosed by Portuguese sources, and indicate with illustrations its justification by Shivaji.

3. 'A special feature of Shivaji's administrative system was the interdependence and mutual control of officers in the various departments.'

Comment and criticize the view.

4. Was the twenty years' war of Aurangzeb in the Deccan a blessing in disguise for the Marathas?

5. Comment on *any two* of the following :—

(1) Many of Shivaji's institutions failed to survive him.

(2) Shivaji's last days were darkened by the perplexing question of succession.

(3) Shivaji's alliances with Golkonda and Bijapur were but pretexts for the pursuit of a policy of conquest and expansion.

#### SECOND HALF

*Examiner*—MR. D. V. APTE

*Answer ANY THREE of the following.*

1. Critically discuss the charge of wanton cruelty brought against Shivaji in connection with the first sack of Surat.

2. To what extent was Rajaram guilty of lowering the prestige of the Chhatrapati?
  3. Give a critical estimate of Dhanaji Jadhav as a man, statesman, and general.
  4. Critically discuss the respective claims of Shahu and Shivaji II (Tara Bai's son) to the headship of the Maratha State.
  5. Do you regard Damaji Thorat, Udaji Chauban, and Krishna Rao Khatavkar as rebels and miscreants?
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## SEVENTH PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner*—MR. G. S. SARDESAL, B.A.

*Answer ANY THREE questions.*

1. Enumerate the services of Balaji Vishwanath to the Mahratha nation.
2. Describe the Saranjami system, its origin and results.
3. Do you think that the Peshwa Balaji Bajirao was justified in suppressing the naval power of the Angrias with foreign assistance?
4. Narrate the circumstances that brought about the ascendancy of Mahadji Sindhia in Mahratha politics.
5. Compare the policy of Lord Cornwallis towards the Mahrathas with that of Sir John Shore.
6. What are the main causes that brought about the downfall of the Mahratha Raj?

### SECOND HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

*Answer ANY THREE questions.*

1. Form an estimate of King Shahu's personality and character.
2. What enemies had the Peshawas to fight on the Western Coast of India? Explain the significance of the conquest of Bassein by the Mahrathas.
3. Give a general account of Mahratha policy towards the Rajputs during the administrations of Bajirao and Balaji Bajirao. Do you notice any difference between the policies pursued by the two Peshawas?
4. Critically examine the results of Raghunath Rao's Northern Expedition, 1757-58.
5. Discuss the causes of the Mahratha defeat at Panipat in 1761.
6. What led to the battle of Kharda? Describe the political results of that action.

**(History of the Sikhs)****SIXTH PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. TEJA SINGH, M.A.***N.B.—Attempt ANY THREE of the questions.**

1. Discuss the question of Guru Nanak's education and its effect on the nature and style of his literary works.

*Or,*

What reasons and facts could you adduce for the supposition that the Gurmukhi characters were invented by Guru Nanak and not by Guru Angad?

2. Discuss the question of the authenticity of Bhai Bala's *Janam Sakhi*. Which book would you prefer as the earliest record of Guru Nanak's life?

3. Mention some of the secular doings of the first six Gurus to show what they did for the economic uplift of the people.

4. 'He was the first Sikh Guru to take up arms, and to surround himself with a bodyguard. He found his followers well prepared for the new rôle which they had to assume.'

Show what had been done up to the time of Guru Hargobind to prepare the Sikhs for this new rôle.

5. Criticize the statement:—

'Fearing the effects of the emperor's displeasure, Hargobind fled to Hurtarpour, a village founded by his father, where he collected an armed body for the defence of his person, and, according to the records of the nation, defeated a force that Jehangir had sent to punish his rebellion.'

**SECOND HALF***Examiner—MR. INDUBHUSAN BANERJI, M.A.**THREE questions to be attempted.*

1. Comment on any three of the following:—

- (a) 'He suffered martyrdom for the sake of his religion ;  
He gave his head but swerved not from his determination.  
God's people would be ashamed  
To perform the tricks of mountebanks and cheats.'
- (b) 'I have cherished thee as My son,  
And created thee to extend my religion.  
Go and spread My religion there,  
And restrain the world from senseless acts.'
- (c) 'Fatah Shah who was the king became angry with me,  
And came to blows with me without cause.'
- (d) 'Let him who is worthy sit on the king's throne.  
The face of the liar shall be cursed ; the true saint only shall  
be magnified.'

(e) 'As to my defeat at Chamkaur, what could forty men do when a hundred thousand came on them unawares? The oath-breakers attacked them abruptly with swords, arrows, and muskets.'

2. 'Gobind seems to have endeavoured to mix himself up with the affairs of the semi-independent chiefs, and to obtain a commanding influence over them, so as by degrees to establish a virtual principality amid mountain fastnesses to serve as the basis of his operations against the Mughal government.'

How far is this a correct statement of the policy that guided Guru Gobind Singh in his relations with the Hill Rajas during the pre-Khalsa period?

3. 'The alleged worship of Durga by the Guru, and all the stories based thereon, are mere fictions, the inventions of clever, yet un-Sikhlike people.'

Examine.

4. Attempt an analysis of the reforms of Guru Gobind Singh. How far is Irvine justified in saying that 'Sikhism, as thus modified by Govind Singh, lost all trace of an elevated ideal that Nanak may have imparted to it'?

5. Discuss *any two* of the following—

- (a) The intrigues of Ram Rai and Dhir Mal.
- (b) The assassination of Guru Gobind Singh.
- (c) The atrocities committed by Banda and his agents.

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## SEVENTH PAPER

*The questions are of equal value.*

*Six questions to be attempted, THREE from EACH half.*

### FIRST HALF

*Examiner*—MR. NARENDRAKRISHNA SINHA, M.A.

1. 'In a few years after the rout of Panipat, the Sikh power had become consolidated . . . a few more raids and incursions were to take place, each less successful than its predecessor, and then the famous Khalsa was to settle down, like a wall of concrete, a dam against the encroachments of the Northern flood.' Explain and illustrate.

2. Describe the part played by *any two* of the following:—

- (a) Adina Beg Khan in the Sikh struggle for independence.
- (b) George Thomas in the Cis-Sutlej Sikh country.
- (c) Ranjit Deo of Jammu in his abode of peace.
- (d) Jassa Singh Ramgarhia in the scramble for power after 1767.

3. Discuss the more important of the Sikh incursions into the Ganges-Jumna Doab, and point out their significance.

4. Attempt an analysis of the polity, and economy of the Sikhs during the Misl period.

5. Give an account of Ranjit Singh's conquest of the Trans-Sutlej Misls. To what extent was Ranjit Singh's success due to the dissensions among the princes and princelings of the Punjab?

SECOND HALF

*Examiner*—MR. INDUBHUSHAN BANERJI, M.A.

6. Describe in outline the administrative system of Ranjit Singh.

'The whole wealth and the whole energies of the people were devoted to war and to the perfection of military means and equipment.' Do you agree?

7. Who were the principal European officers in the court and camp of Ranjit Singh? Explain clearly their position in the Lahore Darbar.

8. Explain the significance of the battles of Haidaru, Nowshera, and Jamrud. Compare the Afghan policy of Ranjit Singh with that of the British.

9. Explain clearly the position of the Dogra party in Lahore politics after the death of Ranjit Singh. Do you agree with Gardner that their ulterior aim was nothing less than the Lahore throne itself?

10. 'By the agreement of the 16th December, 1846, the English assumed the responsibility of the Government of the Punjab.'

Explain the nature of the British protectorate. Discuss the policy of annexation.

## (Constitutional History of the British Dominions)

### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—MR. Y. J. TARAPOREWALA, M.A.

*Attempt ANY THREE questions.*

1. 'The Durham Report is a document of supreme importance.'

'The importance of the Durham Report has been exaggerated.'

Discuss and account for these contradictory views.

2. Estimate critically the changes made in the Australian constitution by judicial interpretation.

3. Criticize, from the standpoint of a constitutional lawyer, the validity or otherwise of the recent changes made in the Irish Free State constitution.

4. Why did South Africa adopt a unitary form of government? Has the choice proved wise?

5. 'The Dominions form a peculiar entity in international law. Amplify.'



## SECOND HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

*Answer ANY THREE questions.*

1. 'The constitutional evolution of Canada has, in broad outline, supplied a model for the other great colonial dominions of the Crown.' Amplify this statement.

2. In what respects did the attitude of Lord Elgin differ from that of Lord Durham towards the French Canadians?

3. Describe briefly the main steps taken towards the establishment of constitutional government in the Australian Colonies between 1823 and 1850.

4. 'The provisions of the South Africa Act, 1909, for the administration of the provinces are the most original in the whole constitution, and are not unworthy of close consideration.' Elucidate this statement.

5. Discuss the changes that have taken place in the relations between Great Britain and the Dominions since the outbreak of the Great War of 1914.

6. Give an account of the differences which exist between the Canadian and Australian Constitutions.

## SEVENTH PAPER

## FIRST HALF

*Examiner*—MR. P. N. BANERJI, M.A., B.L., BAR-AT-LAW.

*Answer ANY THREE questions.*

1. Indicate the main stages in the evolution of British justice in India from 1661 to 1774.

2. Trace the growth of the central authority in British India from 1773 to 1833.

3. Explain the objects and results of the Charter Act of 1853.

4. Give a critical review of the relations of the Indian States with the Paramount Power from 1858 to 1926.

5. Discuss critically the legislative and financial powers of the Indian Legislature.

## SECOND HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

*Answer ANY THREE questions.*

1. Explain briefly the history of the Indian Councils Act, 1892, and discuss the changes that were introduced by that measure.

2. In what respects did the Reforms of 1919 mark an advance on the Morley-Minto Reforms of 1909?

3. Give a short account of the history of communal representation, so far as the Mohamadan community is concerned, up to the time of the passing of the Government of India Act, 1919.

4. 'The theory of the reformed constitution is that Ministers, without being answerable for the reserved departments or for policy associated with the reserved side, are jointly responsible to elected legislature in respect of the transferred half of Government. But it seems to us that it has proved impossible to translate this theory into practice.'

*(Report of the Indian Statutory Commission.)*

Give reasons for this failure to establish 'responsibility' of the transferred side.

5. Discuss the constitutional position of Indian States willing to accede to the proposed Indian Federation as envisaged in the J. P. C. Report of 1934 and the Government of India Bill, 1935

## (China and Japan)

### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

*Answer ANY THREE questions.*

1. Give a short review of Franco-Chinese relations during the latter half of the nineteenth century.

2. Describe the part played by Korea in Chino-Japanese relations down to the War of 1894.

3. Narrate the causes of the Boxer Rebellion at the beginning of the present century.

4. Discuss the problem of Manchuria in Chinese History during the last thirty years.

5. Write a short essay on the political and social ideals of Dr. Sun Yat-Sen.

6. How did the Washington Conference deal with the following questions?—

(a) China's territorial and administrative integrity; (b) Tariff autonomy; (c) The Open Door.

#### SECOND HALF

*Examiner*—DR. H. C. RAYCHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions.*

1. Comment on *any two* of the following passages:—

(a) 'It was neither to force opium nor trade on China that the war of 1842 was fought.' (*Soothill.*)

- (b) 'Whilst I am waiting and considering, my country is falling into pieces, and now when I attempt heroic measures I am accused of rashness. Shall I wait till China has slipped from my hands?'

(Kuang' Hsü.)

- (c) 'The Political system of the Chinese Empire was an autocracy superimposed on a democracy.' (Vinacke.)

- (d) 'The bottom idea of all treaty stipulations and agreements was not the welfare of the people of China, but the profit and ease of doing business by the people of the West.'

(Overlack.)

2. Explain the nature of the problem of 'extra-territoriality'. How did Chinese nationalists propose to solve it?

3. Discuss the effect on Chinese Politics of the great World War of 1914-18 and the consequences of China's participation in the conflict.

4. Form a comparative estimate of the character and career of Yüan Shih-K'ai and Chiang Kaishek.

5. Write short notes on *any four* of the following:—

- (a) The Empress-Dowager Tzu Hsi.
- (b) The treaty of Shimonoseki.
- (c) K'ang Yu-wei.
- (d) The Shanghai incident of 1925 and its reaction on Anglo-Chinese relations.
- (e) The Ito-Harriman agreement.
- (f) The Tung Meng Hui.
- (g) The Tuchunate.
- (h) The Consortium of 1919.

## SEVENTH PAPER

*The questions are of equal value.*

*Only THREE questions are to be attempted from EACH half.*

### FIRST HALF

*Examiner*—DR. N. C. BANERJEE, M.A., PH.D.

1. Show how the coming of the Europeans after a period of exclusion shook the very foundations of Japan.

2. Discuss the causes of the fall of the Shogunate, and show how before its extinction it transmitted its ideals to the revived empire.

3. Enumerate the chief problems before the statesmen of the Imperial Restoration, and explain the causes of their success.

4. Give a critical estimate of *any two* of the following statesmen:—

- (a) Prince Ito, (b) Count Okuma, (c) Prince Katsura,
- (d) Marquis Saionji.

5. Estimate the extent of success with which the Japanese have adopted the ideas and institutions of the West.

## SECOND HALF

*Examiner*—MR. S. C. SARKAR, M.A.(OXON.)

1. \* Write critical notes on *any three* of the following:—

Treaty of Portsmouth, Abolition of Extraterritoriality, Socialism in Japan, Satsuma Rebellion, Antung-Mukden Railway Dispute.

2. Sketch the relations of Japan with Soviet Russia *or* with the United States of America since the War.

3. Trace the industrial development of Japan in the 20th century, with special reference to the protectionist policy of the Government.

4. Discuss the leading features of the Japanese Constitution, and explain the legal and the extra-legal position of the Emperor.

5. Give an account of the development of Japanese Imperialism leading to the breach with the League of Nations.

## (Economic History of England)

## SIXTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. S. C. SARKAR, M.A.(OXON.)

*Answer ANY THREE questions.*

1. What were the forces which led to the break-up of the English manor? Why did the manorial system collapse earlier in England?

2. Describe the main functions of the craft guilds, and indicate the general character of the development of their relations with the town authorities.

3. Examine the economic significance of the growth of English towns in the Middle Ages, and explain the nature of the privileges usually gained by them.

4. Give a connected account of the economic policy of Elizabeth. How far did it succeed?

5. What were the chief arguments of the critics of the Merchant Adventurers? How did the Company justify its extensive privileges?

6. Explain the different elements which together made up the economic system which we call Mercantilism.

## SECOND HALF

*Examiner*—PROF. J. P. NEOGI, M.A., PH.D.(LOND.)

*Answer ANY THREE questions.*

1. Describe briefly the chief characteristics of the organization of the woollen industry in West England before the Industrial Revolution set in.

2. 'The Industrial Revolution supplied the necessity and Robert Owen the inspiration of the British co-operative movement.'

Discuss the statement.

3. Explain the disappearance of the small cultivator as the typical feature of English agriculture at the beginning of the nineteenth century.

4. Outline the history of the free trade movement in Great Britain. To what extent was the prosperity of the country between 1850 and 1873 due to its fiscal policy?

5. Indicate the chief stages in the history of trade unionism in Great Britain in the nineteenth century.

6. Account for the growth of the economic activities of the State in England since 1870. Give illustrations.

## SEVENTH PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.(LOND.)

*Answer ANY THREE questions.*

1. Discuss the problems with which the English were faced in their early days in the task of land revenue collection in Bengal. What kind of solution was the Permanent Settlement of 1793?

2. Explain the method by which the East India Company carried on its trade in Bengal. What was the effect of the Company's trading activities on the commerce and industry of Bengal?

3. Account for the decline of the luxury industries of India in the 19th century. Illustrate by reference to the Punjab shawl industry.

4. Indicate the factors which led to the adoption of an era of free trade in India in the 'seventies and 'eighties of the last century.

5. Trace the circumstances that led to the amalgamation of the three Presidency banks.

### SECOND HALF

*Examiner*—PROF. J. P. NEOGI, M.A., PH.D.(LOND.)

*Answer ANY THREE questions.*

1. Briefly describe the origin and later developments of cotton excise duty in India.

2. 'Interest in the conditions of factory workers was first aroused in India not by the humanity of a few enlightened men but by the discovery of certain Lancashire manufacturers and merchants that a cotton mill industry had sprung up in the Bombay Presidency.' Elucidate.

3. Write a note on the Iron and Steel industry at Tatanagar.
4. What do you know of the origin and development of the co-operative movement in India?
5. Give a short account of the protection given to the Indian cotton textile industry. How far has this protection been justified by the circumstances of the case?

## (Comparative Politics)

### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner—DR. U. N. GHOSHAL, M.A., PH.D.*

*Attempt ANY THREE questions.*

1. In what respects does Maine's Patriarchal Theory fail to account for the origin of the primitive society? What were the factors that tended to produce, according to your view, primitive kingship?
2. Examine the constitution and functions of the Ecclesia and the Heliaea in the Athenian democracy. What part did it play in Greek and Roman polity.
3. Discuss the functions of the Legislature and the Judiciary during Principate, and show how far the system may be properly characterized as a dyarchy.
4. Compare and contrast mediæval Italian city-States with ancient Greek city-States.
5. Discuss the importance of *jus naturale* in ancient polity.

#### SECOND HALF

*Examiner—MR. INDUBHUSAN BANERJI, M.A.*

*THREE questions to be attempted.*

1. Elucidate any two of the following:—
  - (a) 'The origin of Greek tyranny was in the main commercial, and Thucydides is only reflecting this truth when he makes the somewhat enigmatic statement that it was due to the growing wealth of Hellas.'
  - (b) 'The federal union of Arcadia was the result of external forces working on a nation already predisposed to such a form of organization but unable by its own efforts to obtain it.'
  - (c) 'With respect to legislation proper, the Roman, like every other government which recognizes the theory of Parliamentary sovereignty and has no provision for a constituent assembly, drew no distinction between constitutional and other laws.'

(d) 'The radical defect of feudalism was that confusion of public and private rights which was yet essential to it.'

(e) 'Mediæval cities commonly present an industrial organization unlike anything modern, and also in striking contrast with the phenomena presented in the life of the ancient city-state.'

2. Attempt an analysis of the constitution of Sparta. How far is it true to say that it was 'a dynastic oligarchy of a mild type modified by a strong democratic element'?

3. 'The Clisthenean constitution was the unalterable basis on which the future ultra-democratic changes rested, and in this sense, but in this sense only, Clisthenes was the founder of the Athenian democracy.' Explain and comment.

4. 'Since the guidance of magistrates and of people was equally impossible, and central government must reside somewhere, its fitting place was not unnaturally sought in the single experienced, permanent, and deliberative body in the State, the Senate.'

Explain the above statement, and show how, before the revolution begun by the Gracchi, the practical control of the Senate was much greater than its formal power.

5. What were the main forces that led to the destruction of feudalism? Show that these were by nature alien to feudalism, and though often welded into it and partially feudalized, they yet remained essentially distinct.

## SEVENTH PAPER

*The questions are of equal value.*

*Attempt SIX questions in ALL: THREE from EACH half.*

### FIRST HALF.

*Examiner*—MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

1. How has individual liberty been secured in the constitutions of (i) the Irish Free State, (ii) Canada?

2. Compare the federal constitution of Australia with the constitution of the U.S.A.

3. Can the Courts of (i) England, (ii) France, (iii) India, declare statutes passed by the Legislature null and void? If so, to what extent?

4. How far is it true to say that the constitution of Soviet Russia is based upon a fusion of functions?

5. Enumerate the checks and balances of the constitution of the U.S.A. How far are they functioning to-day?

### SECOND HALF.

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

6. 'France has been a laboratory for political experiments.' Discuss.

7. How do (i) the referendum, and (ii) the initiative work, in the constitution of Switzerland?

8. Assess the importance of the House of Lords as (i) a legislative chamber, (ii) a judicial tribunal.

9. How far is it true to say that the Cabinet system has failed in (i) England, (ii) France, (iii) the U.S.A.?

10. What is the relationship between the Quirinal and the Vatican to-day? Does the Pope stand in the way of Italian Imperialism?

Or,

How does fascism offer a challenge to parliamentary institutions?

11. Wherein does the proposed federation for India diverge from the normal type of federalism?

### (Modern Europe)

#### SIXTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—MR. S. N. BANERJI, M.A.

*Answer ANY THREE questions.*

1. 'The gospel of humanity and the traditions of Russian autocracy struggled for mastery within the soul of Alexander I.' Illustrate this remark with reference to European history between 1815 and 1825.

2. Trace the success in stages in the break up of the European alliance after 1822, indicating the part played by Canning.

3. Narrate briefly how Villèle tried to restore the *ancien régime* in France. Why did he fail?

4. Enumerate the principal grievances of the Belgians which led them to break away from Holland. What circumstances favoured the establishment of Belgian independence?

5. 'The interest of German history between 1830 and 1848 does not lie in the evolution of political liberty, for political repression and absolutism were the order of the day. It lies rather in growth along economic lines . . . .'

Expand.

#### SECOND HALF.

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.(LOND.).

*Answer ANY THREE questions.*

1. What were the factors that produced the Near Eastern problem? 'In the vocabulary of English diplomacy, the Eastern question was not included until the period of the Greek war of independence.' Do you agree?

2. 'At every point at which the policies of the two countries, England and France, came into contact, wherever a possibility arose of a



conflict with English influence, the French were ready to make concessions.' Do you consider this to be a proper summing up of the French relations with England from the death of Perier up to the Revolution of 1848?

3. 'Mazzini stands first among the makers of Italy.' Review the career of Mazzini and, in the light of the above remark, estimate his importance in the history of Italian unification and liberation.

1. 'The domestic policy of Nicholas I was also framed in the spirit of reaction.' Develop.

5. Write short notes on *any four* of the following:—

- (1) Abdel Kader, (2) Spanish Constitution of 1812, (3) The Decabrist Conspiracy, (4) The Carbonari, (5) The White Terror, (6) Kossuth.

## SEVENTH PAPER

*The questions are of equal value.*

### FIRST HALF.

*Examiner*—MR. RAMAPRASAD DASGUPTA, M.A.

*Only THREE questions are to be attempted.*

1. Elucidate:—

The year 1848 marked the end of international revolutions and cleared the ground for practical statesmen.

2. Sketch the history of the conflict of nations in the Austro-Hungarian Empire, and summarize the settlement of 1867.

3. What part did Cavour and Victor Emmanuel play in the history of Italian unification?

4. Give an account of the reign of Nicholas I. What were the chief national problems of Russia which confronted him? How far were they solved by his son?

5. Write critical notes on *any two* of the following:

- (i) Frankfort Parliament and the scheme of the Federal Government of 1848.  
(ii) Disputes relating to Schleswig-Holstein.  
(iii) Kossuth.  
(iv) Pope Pius IX.  
(v) The Zollverein.

### SECOND HALF.

*Examiner*—MR. RAMAPRASAD DASGUPTA, M.A.

*Only THREE questions are to be attempted.*

1. 'The settlement of Berlin (1878) was a mere patch work and not a lasting peace.' Discuss with special reference to subsequent events in the Balkans.

2. 'With all his idealism, Alexander II singularly failed in pacifying Russia.' Explain with special reference to the reigns of his two successors.

3. Sketch the history of the 'Third Republic', with special reference to French foreign policy and the consolidation of the republican ideal.

4. Discuss the aims and ideals of Kaiser William II, and show how these contributed to the growth of a strong coalition against Germany.

5. Write critical notes on *any three* of the following :—

- (a) The constitution of the 'Third Republic'.
- (b) Midhat Pasha and the Turkish Constitution (1876).
- (c) Socialism in Germany.
- (d) Theophile Delcassé.
- (e) The reign of Abdul Hamid II.
- (f) Bismarck and the Papacy.

#### EIGHTH PAPER

*Examiner* PROF. S. N. SEN, M.A., PH.D., B.LIT.(OXON.)

Write an essay on *one* of the following subjects :—

- (1) 'Queen Victoria saved monarchy in England.'
- (2) Buddhist and Brahmanical ideal of world conquest.
- (3) The problem of the life beyond with the Egyptians.
- (4) Assyria's contribution to civilisation is twofold: the art of refined cruelty and the art of warfare.
- (5) The great war and the Cabinet system in England.
- (6) National imperialism and the future of the League of Nations.
- (7) Sikhism as a religio-political factor in Indian History.
- (8) Contribution of Spanish Islam to the cultural development of the West.
- (9) Progress of education in India during the Moghul period.
- (10) 'Maharashtra Dharma.'
- (11) Nationalism in Rajput History.
- (12) The proposed Federation for India is a novel experiment in politics.
- (13) Modern State and the individual.
- (14) China and the Pacific problem.
- (15) The Balance of power in Europe during the 19th century.
- (16) Imperial preference within the British Commonwealth of Nations.
- (17) Warren Hastings as an empire builder.

# ANCIENT INDIAN HISTORY AND CULTURE

## FIRST PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

### FIRST HALF.

*Examiner*—DR. PRABODHCHANDRA BAGCHI, M.A., D.LIT.

1. Bring out the historical significance of the words *Ārya* and *Dasyu*, and give in brief outline the main characteristics of the culture of the people of those two denominations.

2. What are the differences between the words *Dera* and *Daera*, and *Asura* and *Ahura*? Explain how these differences came about.

3. When and how did the *Īg-Veda-Saṃhitā* come into existence? Discuss its value as a source of information for the history of the Vedic Period.

4. Write historical notes on the Vedic tribes known as the *Purus*, *Kurus*, *Bharatas*, and *Pañcālas*.

5. Give a brief account of the administrative system of the Vedic period, with special reference to (a) the powers of the king, (b) the popular assemblies, and (c) the important officials.

### SECOND HALF.

*Examiner*—DR. V. S. SUKTHANKAR, M.A., PH.D.

1. Write a note on the origin and development of the epic in ancient India.

2. How far can old national epics be regarded as trustworthy evidences of ancient history? Describe all the circumstances which hamper the utilization of the *Mahābhārata* for writing a complete and satisfactory account of the period with which the epic purports to deal.

3. Compare and contrast the social conditions in the epics and in the later Vedic texts.

4. Give a brief sketch of government in the Heroic Age of India, with special reference to the relation of the king with the priest, the nobles, and the people.

5. Write short notes summarizing the information that may be gleaned from the epics on *any three* of the following topics:—

- (a) Royal occupations.
- (b) Ambassadors.
- (c) Imperial City.
- (d) Succession to the throne.
- (e) Social relations of the king.

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner*—DR. RAMESCHANDRA MAJUMDAR, M.A., PH.D.

*Not more than THREE questions to be attempted.*

1. Write a note on Aryan colonization and settlement of Peninsular India. Refer to your sources of information.
2. Sketch the history of the Nundas with full reference to your sources of information.
3. Examine the circumstances that led to the downfall of the Maurya empire. To what extent, if any, was Aśoka responsible for it?
4. Write a short historical account of Khāravela and his times.
5. Say what you know of Gondophernes and Azes. Refer to your sources of information.
6. 'Nothing definite is recorded concerning the dynasties of Northern India, excluding the Punjab, during the third century and early part of the fourth.' Discuss.

## SECOND HALF.

*Examiner*—DR. HEMCHANDRA RAY, M.A., PH.D.

*Attempt THREE questions only.*

1. Write a short history of the Śātavāhanas with special reference to (a) their origin, (b) date of Śimuka, (c) outstanding achievements, (d) religious and economic condition, and (e) causes that led to their decline and downfall.
  2. Give a short account of the early Kadambas of Kuntala during the period c. 350-550 A.D. with special reference to the Talgunda pillar-inscription of Kāṅkusthavarmaṇ.
  3. Write a short history of the imperial Guptas with special reference to (i) their rise to power, (ii) victories of Samudra Gupta in *Aryāvarta* and *Dakṣiṇāpatha*, (iii) effect of Hūṇa invasions on their empire, and (iv) extent of their dominions about 500 A.D.
  4. Give an account of the political relation of the *Puṇḍravardhana-bhukti* and *Ḍabhālā* with the imperial Guptas. Refer to your sources of information.
  5. Write a critical note on the tribal republics in ancient India.
  6. Who were the Śuṅgas? Describe the nature and extent of their empire.
-

## THIRD PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner*—DR. HEMCHANDRA RAY, M.A., PH.D.

*Attempt THREE questions only.*

1. Write short notes on any five of the following :

- (a) *Nīlanātapurāṇa*, (b) Jalauka, (c) Khinikhila-Narendrāditya, (d) Saṁdhi-mati-Āryarāja, (e) Meghavāhana, (f) Mihirakula, (g) Pravarasena II, (h) Bālāditya, and (i) Mātrigupta.

*Or,*

Comment on any one of the following :

(i) 'The period of approximately half century (958-1003 A. D. ) which follows is dominated by the masterful personality of Diddā.'

(ii) The history of Kashmir in the last days of Hindu independence is mainly a story of continuous struggle between the king and the Īṣṇaras.

2. Critically review the history of the Puṣpabhūtiś of Sthānviśvara with special reference to (a) their relations with the Maukharis and the Gauḍas, (b) extent of the dominions of Harṣa, and (c) the effect of the death of Harṣa on Indian history.

3. Discuss the origin of the Senas of Bengal and their relations with (i) the Śūras, (ii) the later Pālas of Bengal and Bihar, (iii) the Kaṇṇaṭakas of Tīrhuṭ, and (iv) the Gaṅgas of Kāliṅga.

4. 'With a sign of his gracefully moved eyebrows he installed the illustrious king of Kāṇyakubja, who readily was accepted by Bhoja, Matsya, Mādra, Kuru, Yadu, Yavana, Avanti, Gandhāra, and Kīra kings, bowing down respectfully with their diadems trembling, and for whom his own golden coronation jar was lifted by the delighted elders of Pāñcāla.' Elucidate.

5. How far was Rājasekhara justified in describing the Gurjara-Pratīhāra ruler Mahīpāla I as 'the pearl-jewel of the lineage of Raghu, the Mahārājadhīrāja of Āryāvarta' ? Give reasons for your answer.

6. Write a note on the powers that sprang up on the ruins of the later Cālukyas ( of Kalyāṇī ). Locate them by drawing a sketch map of the Deccan.

7. Write a short history of the Cāhamānas of Śākambharī, with special reference to the reigns of Vīrahārāja IV and Prthivīrāja III.

## SECOND HALF.

*Examiner*—DR. BINAYCHANDRA SEN, M.A., PH. D.

*Attempt ANY THREE of the following questions.*

1. What impression did Hiuen tsang form of Pulakeśi II, the Chālukya king of Bādāmi, and his subjects ? Give a critical account of the career of this king, emphasizing those of his achievements which established his pre-eminence in the history of the Deccan of his time.

2. Can you identify the Draviḍa Ruler who, according to the records of the Pālas, was humiliated by Devapāla of Bengal? Trace the earlier history of this antagonism as far as possible.

3. Is there any link available connecting the Chālukyas of Bādāmi with those of Kalyāṇi? Discuss the latter's relations with Malwa, Chedi, and the Chōlas.

4. Write a short history of the Rāshtrakūṭa Empire after Amoghavarsha I, with special reference to its relations with (a) the Chōlas, (b) the Paramāras, and (c) the Chālukyas of Vengi.

5. Review the history of the Chōlas of Tanjore, and refer to the salient features of their administrative system.

6. Write critical notes on the following :—

(i) Bilhāṇa.

(ii) Śrīvallabha of the Jaina Harivaṃśa dated 7-3 A. D.

(iii) Basava.

(iv) Bhillama of Devagiri.

7. Point out the importance of the Western Gangas of Talakūṭ in the history of Mysore.

#### FOURTH PAPER

*The questions are of equal value.*

##### FIRST HALF.

*Examiner—MR. JITENDRANATH BANERJEE, M.A.*

*Only THREE questions are to be attempted.*

1. Estimate the relative value of the various Graeco-Roman notices of the ancient geography of India.

In what manner has our knowledge of this subject been advanced by the study of archaeology?

2. Name the principal cities and dependencies of the kingdom of Kashmir in the middle of the 7th century A.D. Try to locate them in a sketch-map.

3. Give an account of Hiuen Tshang's itinerary in Gandhāra, locating the principal places of interest visited by him in that region.

4. Name the principal divisions of Western India in the time of Hiuen Tshang. Determine their extent, and name as far as you can their chief cities and ports.

5. Discuss the identification of *any six* of the following :—

Tsau-ku-ta; Mou-lo-san-pu-lo; Kiao-shang-mi; Śrāvastī; Kapilavāstu; Vaiśālī; Puṇḍra-varddhana; Nagarahāra; Opianum; Hippokura.

## SECOND HALF.

Examiner—DR. HEMCHANDRA RAYCHOUDHURI, M.A., PH.D.

Not more than THREE questions to be attempted.

1. What are our main indigenous sources of information regarding the historical geography of Ancient India? Discuss in this connection the date and credibility of the geographical cantos of the *Mārkaṇḍeya Purāṇa*.

2. Describe the successive stages in the Aryan occupation of the *Madhyadeśa* and Eastern India. Refer to the sources of your information.

3. Draw a map of India, locating the following:—

- (a) the *Kula-parvatas*, and
- (b) the rivers issuing from the *Pāriyātra*.

4. Write notes on any four of the following:—

- (a) *Sapta Sindhavaḥ*.
- (b) *Jambu-dvīpa*.
- (c) *Kumāri-dvīpa*.
- (d) *Maryādā-parvatas*.
- (e) 'Such is this country *Bhāratī*, constituted with a fourfold conformation.'
- (f) The *Aparāntas*.
- (g) The *Palāsini*.
- (h) *Bhallaṭa*.

5. Can you distinguish between—

- (a) *Gauḍa* and *Vaṅga* ;
- (b) the *Dhruvā Madhyamā* diś of the *Brahmaṇa* texts and the *Madhyadeśa* of *Manu* ;
- (c) *Avanti* and *Mālava* ;
- (d) *Odra* and *Kalinga* ?

## Group I (A)

## (Archæology-Epigraphy, etc.)

## FIFTH PAPER

The figures in the margin indicate full marks.

Attempt THREE questions from EACH half.

Questions 1 and 6 are compulsory.

## FIRST HALF.

Examiners— { PROF. D. R. BHANDARKAR, M.A., PH.D.  
DR. NIRANJANPRASAD CHAKRABARTI, M.A., PH.D.

1. Translate four of the following extracts into English, adding critical and explanatory notes wherever necessary :— 20

(a) *Prāṇānaṁ sādhu anārambho apa-vyayatā apabhāṭatā sādhu parisa-piyute ānapayisatī gaṇanāyaṁ hetuto cha vaimjanato cha.*

(b) *Esa hi seṣṭe kaṁme ya dhammānusaṣaṇaṁ dhammacharaṇe pi na bhavati aṣilasa ta imamhi athamhi vadhī cha aṣiṇi cha sādhu.*

(c) *Sāra-vadhī tu bahuvīdhā tassa tu idaṁ mūlaṁ ya vachī-guṭṭi kiṁti ātpa-pāsaṁḍa-pūjā va para-pāsaṁḍagarahā va no bhavē aprakaraṇamhi lahuḁā va aṣa tamhi tamhi prakaraṇe.*

(d) *Imāni āṣinava-gāmīni nāma aṭha chaṁḍiye niṭhūliye kodhe māne isyā kālanena va hakaṁ mā pali-bhāsayisaṁ.*

(e) *Adā a.....te mahāmūtā nikhamisaṁti anusaṁyānaṁ tadā ahāpayitu atane kaṁmaṁ etaṁ pi jāṇisaṁti taṁ pi tathā kalaṁti aṭha lājine anusathī ti.*

( ) *Nāsti hi me toṣo uṣṭānamhi aṭha-saṁtīraṇāya va katavya-mate hi me sarva-loka-hitaṁ ta a cha puna esa mūle uṣṭānaṁ cha aṭha-saṁtīraṇā cha.*

- |   |    |
|---|----|
| 2. Give in brief the contents of the Seventh Pillar edict.                                      | 15 |
| 3. Discuss the chronology of the inscriptions of Aśoka.   | 15 |
| 4. Name and identify the contemporary kings and border states mentioned in the edicts of Aśoka. | 15 |
| 5. Define Aśoka's position with regard to the Buddhist Church.                                  | 15 |

#### SECOND HALF.

Examiners— { PROF. D. R. BHANDARKAR, M.A., PH.D.  
DR. NIRANJANPRASAD CHAKRABARTI, M.A., PH.D.

6. Transcribe *one* of the extracts quoted in Question 1, (First half) in Aśoka's Brāhmī. 18

7. Comment fully on any *four* of the following :— 16

- (a) Maharayasa Guduvharasa vashe 20 4 11 saṁvatsare tiṣatimac.
- (b) Maharayasa Gusarasa rajami.
- (c) Saṁvatsaraye 1 100 20 10 4 ajasa śravaṇasa masasa divase treviṣe.
- (d) Maharajasa rajatirayasa devaputrasa kaṁsarasa.
- (e) Māgadhaṁ cha rājānaṁ Bhasatimitaṁ pāde vaṁdūpayati.
- (f) Saka-Yavana-Palṭava-nisūdanasya.

8. State in brief the interesting historical information you gather from a critical study of the Brāhmī inscription from Mahāsthān. 16

9. State all that you know of the Śakas of Ujjain from the inscriptions you have read. 16

10. Write short notes on any *SIX* of the following :— 16

Meridarkha, horaka-parivāra, muroḁa, Daṣi(n)ka, lupadakhe, Triraṣmi-parvata, Musikanagara, saṁlila-nidhana, Aparamahāvīnaseliya, and mahātala-vari.



## SIXTH PAPER

## FIRST HALF.

Examiner—DR. BINAYCHANDRA SEN, M.A., PH.D.

*The figures in the margin indicate full marks.*

*Attempt THREE questions of which Question 5 must be one.*

1. Give an account of the round of conquests of various kinds made by S<sup>c</sup> mudragupta as you gather from the *Harishena prakāśī*, adding succinct notes on the names of persons and places occurring therein. 18

2. In the opinion of a great Indologist 'Skandagupta was the greatest of the great Gupta sovereigns', and he supports this opinion, amongst others, by the historical evidence furnished by the Bhitari pillar and the Junagarh rock inscriptions of that monarch. Discuss this opinion in the light of these two inscriptions. 18

3. Where is Mandasor? What was its ancient name? Name the inscriptions of the Gupta age that have been discovered there. Construct a short history of the Varman rulers of who were feudatories under the imperial Guptas, with the help of epigraphic records you have studied. 18

4. Annotate fully any three of the following passages:— 18

(a) काकनादवीटश्रीमहाविहारे .. ..... चतुर्द्दशगताय श्रमणपुंगवावसथायार्थसंचाय  
महाराजाधिरात्रयोचन्द्रगुप्तपादप्रसादाय्यायितजीवितसाधनः ..... उन्दावप्राप्तकाईवः.....  
ईश्वरवासकं पञ्चमखट्वां प्रणिपत्य ददाति पञ्चविंशतिश्च दौनारान् ॥

(b) नीचैलेनापि यस्य प्रणतिभुजबलावर्जनक्षिष्टमूर्ध्ना ।  
चूडापुष्पोपहारैर्मिहिरकुलनृपेणार्चितं पादयुगम् ॥

(c) उत्प्लवाय विषतो विजित्य वसुधां कृत्वा प्रजानां प्रियं ।  
प्राणानुष्कितवानरातिभवने सत्यानुरोधेन यः ॥

(d) प्राप्तेन स्वमुजार्जितं च सुचिरं चेकाधिराज्यं चितो ।  
चन्द्राङ्गेन.....भूमिपतिना भावेन विष्णौ सति ।  
प्रांशुर्विष्णुपदे गिरौ भगवतो विष्णोर्ध्वजः स्थापितः ॥

(e) पुण्ड्रवर्धनभुक्ताष्टपरिक-चिरातदत्तस्य भोगेनानुवहमानककोटिवर्षविषयं तन्निपुणक-  
कुमारामात्य-वेदवकाणि अधिष्ठानाधिकरणश्च नगर्येष्टि-धृतिपाल-सार्थवाह-बन्धुमित्र-प्रथमकुलिकधृति-  
मित्र-प्रथमकायस्थ-शास्त्रपाल-पुरोगे संव्यवहरति.....दत्ताः ॥

5. Transcribe the two inscriptional passages in the accompanying plate in Roman, Devanāgarī or Bengali script. 12





## SECOND HALF.

Examiner—DR. R. G. BASAK, M.A., PH.D.

*The questions are of equal value.*

*Attempt ANY THREE of the following questions.*

1. How far is the Aphaṣṭ inscription of Ādityasena a study in contemporary politics ?

2. Summarize the contents of the *Praśastī* composed by Ravikīrti, and indicate its importance from the historical and literary standpoints.

3. What information does the Sanjan grant furnish as to the relations of the Rāshṭrakūṭas with North Indian rulers ?

4. To what extent are you indebted to inscriptional sources for your knowledge of *any two* of the subjects noted below?—

- (i) The contact of Eastern India with Sumatra and Java in the 9th century A.D.
- (ii) Karnaśuvārṇa as a part of Bhāskaravarman's dominions.
- (iii) The expansion of Gurjara power under Bhoja I.
- (iv) The position of Lakṣmī-Karṇa among the rulers of his time.
- (v) The eastern campaigns of Rājendra Choḷa I.

*Or,*

When did the Nāgarī alphabet first make its appearance ? Briefly discuss its subsequent history.

5. Write explanatory notes on the following :—

(i) Rājāno yudhi duṣṭa-vājina iva Śrī-Devagupt = ādayaḥ kritvā yena kaśā-prahāra-vimukhās = sarve samam sāmyatāḥ. Utkhāya dvishato vijitya vasudhām kritvā prajānām priyaṁ prāṇam = ujñhitāvan = arātibhāvanē saty = ānurodhēna yaḥ.

(ii) Labdhvā kālam bhuvam = upagatē jētum = Āppāyik = ākhyē.

Govindē cha dvirada-nikarair = uttarām = Bhaimarathyāḥ.

(iii) Rājātmā mana ēva tasya sachivas = sāmanta-chakraṁ punas = tan = nity-ēndriya varga ēsha vidhivad = vāg = ādayas = sevakāḥ. Dēha-sthānam = adhishṭhitāḥ sva-vishayaṁ bhōktum sva-tantraḥ kshamaḥ...

(iv) Pāśchātya-chakra-jaya-kelishu yasya yāvad = Gaṅgā pravāham = anudhāvati nau-vitanē...

**(Archæology—Epigraphy and Numismatics)****SEVENTH PAPER****(Numismatics)**

*The questions are of equal value.*

*Only THREE questions are to be attempted from EACH half.*

**FIRST HALF.**

*Examiner—MR. JITENDRANATH BANERJEE, M.A.*

1. 'It is clear that the punch-marked coinage was a private coinage issued by guilds and silversmiths with the permission of the ruling powers.' Do you agree?
2. Describe the special features of the Ayodhyā and Kosam coins.
3. To which dynasty or dynasties would you ascribe the coins bearing the names of Agnimitra, Jethamitra, Indamitra, and Bhadrakāśas?
4. How far do the coin-types of the following rulers help us in reconstructing their history?—  
Demetrius ; Eukratides ; Heliokles ; Strato I with his associates ; Hermaios.
5. Discuss the numismatic peculiarities of the coins of :—  
(a) Gondophares and his successors ;  
(b) The Kadphises group of kings.

**SECOND HALF.**

*Examiner—DR. A. S. ALTEKAR, M.A., LL.D., D.Lit.*

6. Describe the coins found in the Kolhapur hoard. What theories are there in the field about the identity of the rulers represented in the hoard? Which of them do you accept or prefer, and why? How will you determine the order of succession among these rulers?
7. (a) Discuss fully the reading and interpretation of the legend on the obverse and reverse sides of the silver coins of Gautamīputra Śrī Yaśodhara Sātakarṇi. What are the palaeographical peculiarities of the legend on the reverse?  
(b) Describe the successive stages of the disappearance of the Kharoshthī script from the coins of the Śaka Satraps of Western India.
8. Discuss fully all the historical evidence throwing light upon the relations between Jivādāman and Rudrasinha. How far will you accept the view of Rapson that 'the most natural supposition is that during the years 110—2 Jivādāman had again assumed the chief power in the kingdom'?
9. Describe the main features of the principal varieties of the silver coinage of the Imperial Guptas. What are the main points of difference between the Gupta gold and silver coinage?
10. Write descriptive and explanatory notes on :—  
(1) The coinage and identity of Kācha.  
(2) The Aśvamedha coins of the Imperial Guptas.  
(3) The coinage of Śaśāṅka.  
(4) The coins of Budhagupta and Vainyagupta.



Archaeology—Eighth Paper First Half Question 1.



2.



3.



4.



5.



6.



7.



8.



9.



10.



11.



12.

## EIGHTH PAPER

## (Archæology)

*The figures in the margin indicate full marks.*

## FIRST HALF.

*Examiner*—MR. NANIGOPAL MAJUMDAR, M.A.

1. Describe *any eight* of the coins reproduced in the accompanying plate, adding your remarks on each. 32
2. Write what you know about *any three* of the following :— 18
  - (a) Commemorative medals issued by certain Indo-Bactrian rulers.
  - (b) The coins of Vonones and his associates.
  - (c) The varied reverse of the coins of Kanishka and Huvishka.
  - (d) Avanti coins.
  - (e) The weight system of the Kushana gold coins.

## SECOND HALF.

*Examiner*—MR. K. N. DIKSHIT

1. Write an essay on *any one* of the following subjects :— 50
  - (a) The evidence of literature on the subject of early Indian currency.
  - (b) The origin and development of tribal coins and the light they throw on the forms of government in Hindu India.
  - (c) The development of the indigenous and foreign standards of weight in Indian coinage of the Pre-Muhammadan period.

## Group I (B)

## FIFTH PAPER

## (Archæology)

*The questions are of equal value.*

## FIRST HALF.

*Examiner*—DR. KALIDAS NAG, M.A., D.LIT.

## Attempt ANY THREE.

1. Persian and Hellenistic influences on Mauryan sculpture are undeniable ; equally obvious is the fact that Mauryan sculpture is of the same stock as that of the Indus Valley. Discuss.
2. Classical Indian sculpture experienced its early maturity in the art of Mathurā in the first two centuries of the Christian era. 'At no other



stage of Indian sculpture has the plastic sense been so entirely steeped in the physical.' Evaluate the statement.

3. What did Mathurā and Sāranath contribute to Gupta sculpture, and how did the two centres lead to the formation of two different 'schools,' the Eastern and the Western? Evaluate the æsthetic achievement of the Dekkhanī tradition of Gupta sculpture.

4. How and to what extent did the art of Vengi influence the Pallava art of Māmallapuram? 'Most of the rock-cut reliefs of Māmallapuram are architectonic in their structure.'

Explain.

5. 'A more conscious and more sophisticated art like that of Ajanṭā could scarcely be imagined. Classical Sanskrit poetry and drama and the later Ajanṭā paintings all reflect the same phase of luxurious aristocratic culture. In many matters of detail the painting and literature supply a mutual commentary.' Discuss.

#### SECOND HALF.

*Examiner*—MR. NIRMARRANJAN RAY, M.A.

#### *Attempt ANY THREE.*

6. How and to what extent did Indian tradition influence the manuscript paintings of Nepal, the banner paintings of Tibet, and the wall-paintings of Burma? How do you connect them with contemporary Bengali manuscript paintings?

7. Give a general description of the wall-paintings of Sigiriya, and show how they are related to the contemporary style of painting at Ajanṭā. How do you explain this relation?

8. 'To apply the name "Indian Colonial" to the several national schools, after the eighth century, is an injustice to the vigour and originality of the local cultures.' Comment generally on the above statement, with special reference to the different trends of sculpture of Java, Campā, and Kamboj.

9. 'The sculpture at Mendut and Borobudur is, however, of value for its own sake. Not only is it an immense advance upon that at Dieng, if regarded from the Javanese point of view only, but when viewed in connexion with Indian sculpture too, it includes perhaps the masterpieces of Gupta ideal of art.' Discuss.

10. 'The art of Campā, with its Indian influences, attains a beauty never surpassed by the schools of the Ganges and the Deccan, without departing from Indian æsthetic standards.' Discuss this statement, with special reference to the celebrated sand-stone bust of Pārvatī, from Hu'o'ng-quan, the blue sand-stone figure of Skanda on his peacock, from Mis'on, and the dancing female figures on the bas-reliefs, from Trakieu.

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**(Archæology—Fine Arts and Iconography)****SIXTH PAPER****(Iconography)**

*Only THREE questions are to be attempted from EACH half.*

**FIRST HALF.**

*Examiner—MR. JITENDRANATH BANERJEE, M.A.*

*The questions are of equal value.*

1. Critically examine the theory that the Indians were indebted to the Greeks for the practice of image-worship.

2. Name and briefly describe the principal varieties of the *dhruva-eras* of Viṣṇu. How can you explain the wide prevalence or paucity of particular varieties among them?

3. Discuss the iconographic peculiarities of the Sūrya images of the Guptan and early mediæval periods. What light do they throw on the Sun-cult in India?

4. (a) Estimate the iconographic importance of *Guḍimallam Liṅga*.

(b) Add explanatory notes on any three of the following :—

(i) *Śiraścakra* ; (ii) *Brahmasūtras* ; (iii) *Dharmacakramudrā* ; (i) *Viṣṇupaṭṭas* ; (v) *Aṅgula* unit, and *Draviḷa māna*.

5. Describe the special features of any three of the following types of images, adding your own remarks, wherever necessary :—

(i) *Harīhara* (ii) *Liṅgodbhavamūrti* ; (iii) *Mahīṣāsuramardīnī* ; (v) *Śarabhamūrti* ; (v) *Jyēṣṭhā*.

**SECOND HALF.**

*Examiner—MR. N. K. BHATTASALI, M.A.*

*The figures in the margin indicate full marks.*

*Answer Question 5, and ANY TWO from the rest.*

1. Who are the Mānuṣī Buddhas? Discuss their historicity with special reference to inscriptional evidence, and point out their distinguishing features. 16

2. Describe the following with special reference to the Dhyānī Buddha from whom they emanate :— 16

(i) Mañjughoṣa.

(ii) Jāngulī.

(iii) Nairātma.

3. Name and describe five of the Jātakas represented at Bharhut, and recount the story in each case. 16

4. Write notes on *any two* of the following :— 16
- (i) Sirimā Devatā.
  - (ii) The Apsarases on the Bharhut Rails.
  - (iii) Hārītī.
5. Identify and describe the special features of the deities represented on plates A and B in the accompanying sheets. 18

(GROUP B)

**(Archæology)**

SEVENTH PAPER

*The questions are of equal value.*

*Attempt THREE questions only from EACH half.*

FIRST HALF.

*Examiner*—DR. STELLA KRAMRISCH, PH.D.

1. Enumerate the main elements of the Stūpa, and indicate their evolution in India and Further India.
2. Write an account of the Āmalaka and discuss the theories about its origin.
3. Point out the main features of Nāgara, Vesara, and Drāviḍa temples.
4. Describe the caves in the Barabar hills.
5. Write an account of structural temples of the Gupta age.
6. Trace the evolution of the Caitya hall.

SECOND HALF.

*Examiner*—DR. KALIDAS NAG, M.A., D.LIT.

1. Write a short essay on :—  
The architectural remains of the Indus Valley Civilization.
2. 'Painting often goes hand in hand with Architecture in ancient Indian Art.'  
Amplify the above statement.
3. Write a note on the architecture of Ceylon or Burma, tracing it with reference to the architectural development in India.
4. Discuss the originality of Cambodian architecture with a detailed discussion on the Angkor Vat.
5. Trace the history of the migration of Brahmanical art in Insulinia, discussing the importance of the temple of Prambanan.

PLATE A



PLATE B



**(Group I. B.)****(Archæology)****EIGHTH PAPER**

*The figures in the margin indicate full marks.*

**FIRST HALF.**

*Examiner*—PROF. SHAHID HASAN SUHRAWARDY, B.A.(OXON.).

*Candidates have the option of answering ANY TWO of the first four questions. The FIFTH question is obligatory.*

1. Give the characteristics of Chinese Art under the T'ang, with special reference to Buddhist sculpture. 15
2. Give a short sketch of the rise and diffusion of frescoe painting in Asia. 15
3. Characterize Achaemenian Art with examples. 15
4. Describe briefly Buddhist art in Korea and Japan. 15
5. Write full notes on *any three* of the following:— 20
  - (1) Han mirrors, (2) Behistun sculpture, (3) Origin of the halo,
  - (4) Technique of Ajanta wall-paintings, (5) The Kwanon of Horuyuji,
  - (6) Altamira Cave paintings, (7) The Wei 'line', (8) The Animal Style,
  - (9) Hellenistic bas-reliefs in Asia Minor.

**SECOND HALF.**

*Examiner*—DR. STELLA KRAMRISCH, PH.D.

1. Write an essay on:—

(a) Orissan architecture. 50

*Or,*

(b) Ancient Indian towns and their buildings (reconstructed with the help of contemporary representations in relief and with the prescriptions of the *Mānasāra* and other texts). 50

*Or,*

(c) The relation of sculpture and architecture in Indian temples. 50

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**(Group II)****(Social and Constitutional History)****FIFTH PAPER***The questions are of equal value.***FIRST HALF.***Examiner*—**DR. UPENDRANATH GHOSHAL, M.A., PH.D.***Attempt THREE questions only.*

1. Comment on the funeral customs in vogue among the Indo-Aryans of the R̥gvedic period.
2. 'The Brāhmaṇas present us with a stage intermediate between the rules of the Sūtras and the laxity of the R̥gveda.' Justify this description of the social condition in existence in the period of the Brāhmaṇas.
3. Describe the ceremony of the *Upanayana*, and explain its significance in the life of the Indo-Aryans.
4. What evidence does Vatsyayana's *Kāmasūtra* furnish for the prevalence of the following practices?—  
(a) Intercaste marriage, (b) courtship before marriage, (c) widow remarriage.
5. Summarize the duties of the ascetic after the account of the *Maṇusmṛiti*

**SECOND HALF.***Examiner*—**MR. HARANCHANDRA CHAKRADAR, M.A.***Answer THREE questions only.*

1. Describe the *Āśramas* as they were developed in the Vedic Age, and explain their significance in the social organization of ancient India.
2. Show how the ceremony of marriage of the Vedic Hindus has some points in common with that in vogue among other branches of the Aryan-speaking people.
3. Describe the ceremonies at the birth of a male child in ancient India. Do you discover any longing for a male child among the Vedic Aryans?
4. Describe the daily round of duties of a householder in ancient India.
5. Write short notes on the following :—  
*Madhuparka ; Niyoga ; Anuloma and Pratiloma marriage ; Sahamarāṇa.*

## SIXTH PAPER

*The questions are of equal value.*

*Only THREE questions are to be attempted from EACH half.*

## FIRST HALF.

*Examiner*—DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.

1. Examine the economic foundations of the Vedic period, and critically discuss the question of land-ownership.
2. Give an account of the economic condition described *either* in the *Mahābhārata* or in the *Jātakas*.
3. 'The Indian State was more social than political.' Discuss with special reference to Vedic texts and the *Arthasāstra*.
4. Describe the part played by the guild in Indian economic life, and discuss its various functions.
5. Write critical notes on *any three* of the following :—
  - (1) Relation between caste and craft in the *Smṛtis*.
  - (2) Regulation of profits and prices in the *Arthasāstra*.
  - (3) Study of economics in ancient India.
  - (4) Slavery in ancient India.
  - (5) State aid to agriculture and agriculturists.

## SECOND HALF.

*Examiner*—DR. RADHAKEMUD MUKHERJEE, M.A., PH.D.

1. Write a note on occupations in ancient India as observed by Megasthenes.
  2. Discuss the foundations of Regional Economy on the basis of Kauṭilya's *Arthasāstra*.
  3. Give an account of the Export and Import Trade of India in the early centuries of the Christian era, and the light it throws on the industrial life of the times.
  4. Discuss the measures adopted by the State in ancient India to check capitalism and exploitation of Labour.
  5. Write notes on *any three* of the following :—
    - (1) Ownership of Land according to Kauṭilya.
    - (2) Use of Iron in ancient India.
    - (3) State Control of Salt-production.
    - (4) Relief of Distress.
    - (5) Regulation of Child Labour.
-



## SEVENTH PAPER

*The questions are of equal value.*

## FIRST HALF.

*Examiner—* DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.

*Only THREE questions are to be attempted.*

1. Give a short account of the political life of the Vedic period, and account for the growth of regal power.
2. Estimate the amount of popular participation in politics in ancient India during the post-Vedic period.
3. Describe in detail the administrative system of the Gupta period, and discuss its influence upon the organization of the Pālas and Senas.
4. Summarize the political ideals of Kauṭilya with regard to the duties and functions of a 'national king'. Was he (Kauṭilya) an imperialist?
5. Write critical notes on *any three* of the following :--
  - (a) The sabhā in the Vedic period.
  - (b) The constitution of the Licchavis.
  - (c) Village administration under the Colas.
  - (d) The 'law of Treason' in the Arthaśāstra.
  - (e) The ideal of Dharma-Vijaya.
  - (f) Women in Indian politics.

## SECOND HALF.

*Examiner—* DR. NARENDRA NATH LAW, M.A., B.L., PH.D.

Write an essay on *any one* of the following :--

- (a) 'A mere police State was not the ideal of Hindu thinkers.'
  - (b) 'The political thoughts and ideals of the Hindus were intimately connected with their religious feelings and aspirations.'
-

## EIGHT PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. HARANCHANDRA CHAKLADAR, M.A.

*Answer ANY THREE questions.*

1. Do you find any anthropological significance in the following statement of Devala?—

‘He who has visited the (countries of the) Sindhus, Sauvīras, Saurāstras, inhabitants of the frontier regions, of the Aṅgas, Vāṅgas, Kāliṅgas, Andhras, should go through the ceremony of initiation anew.’

2. What is the nasal index? How far does the shape of the nose correspond with the social grouping in India?

3. Give an account of the roundheaded leptorrhine element in the Indian population, discussing fully their affinity with peoples outside the country.

4. Discuss how far we are right in assuming the presence of a Negrito or Negroid element in the population of India.

5. Write ethnic notes on the following :—

Kāyastha, Oran, Gond, Bābhan, Gurkha, and Vedda.

## SECOND HALF

*Examiner*—DR. HEMCHANDRA RAY, M.A., PH.D.

*Answer ANY THREE questions.*

1. Write a note on *Totemism*, with special reference to its origin and the totemistic tribes in India.

2. Is there any evidence of the presence of levirate in ancient India? How far does it exist in India at the present day?

3. Write notes on the following :—

Endogamy, Exogamy, Hypergamy, Shamanism, Tabu, and Gotra.

4. Describe the ceremony of marriage in any Hindu caste, and try to trace the sources from which the various elements are derived.

5. Describe the various types of caste in India. Illustrate your answer by giving examples of each type.

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**(Group III)**  
**(Religious History)**

**FIFTH PAPER**

*The questions are of equal value.*

**FIRST HALF**

*Examiner—DR. PRABODH CHANDRA BAGCHI, M.A., D.LIT.*

*Answer ANY THREE of the following.*

1. Discuss the basis of classification of the Vedic gods, and describe the common characteristics of the gods of each class.
2. Bring out the importance of *Agni* and *Soma* in the Vedic religion.
3. What do you know of the religion of the Pre-Aryan population living outside the pale of Aryan Society? What influence did their primitive beliefs exert on the religion of the Indo-Aryans?
4. Write comparative notes on *Indra* and *Verethraghna*, *Mitra* and *Mithra*, *Nāsatya* and *Nasathya*.
5. Describe briefly the Vedic conceptions of the world and its origin.

**SECOND HALF**

*Examiner—DR. SITANATH PRADHAN, M.A., PH.D.*

*Answer ANY THREE of the following.*

1. Examine the evidence regarding the prevalence of image-worship in Rigvedic times.
2. Was human sacrifice in vogue amongst the Vedic Aryans?
3. Describe the characteristics of the Vedic god *Brhaspati*. Was he an apotheosized human chieftain, a hero-leader of the *Aṅgirasas*?
4. Give a brief exposition of the Vedic conception of the following deities :—

*Varuṇa, Viṣṇu, Maruts, Rbhus, Vivasvant, Apāṃ Napāt.*

5. Write notes on *any four* of the following :—

*Abhijit, Ābāva, Udgitha, Gharma, Pra-uga Śastra, Prācīnavamśa, Yāga, Homa, Sruk.*

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## SIXTH PAPER

*The questions are of equal value.*

*Not more than THREE questions to be attempted from EACH half.*

## FIRST HALF

*Examiner*--DR. HEMCHANDRA RAYCHAUDHURI, M.A., PH.D.

1. Discuss the evolution of the conception and cult of Vishṇu-Nārāyaṇa in the epic age.
2. Examine critically the various theories regarding the original character of Vāsudeva, and attempt a brief survey of his life and teachings.
3. Write critical or historical notes on the (a) four *Vyūhas*, and (b) the ten *Avatārās*.
4. Can you trace some of the stories about the child Kṛishṇa and the doctrines of the early Bāgavatas to a non-Indian source? Give reasons for your answer.
5. Point out the significance and discuss the antiquity of the conception of *Hari-Rudra* and of *Trimūrti* as found in the great epic and the *Purāṇas*.
6. Point out the importance of the Besnagar Inscription of Heliodorus from the point of view of religious history.

## SECOND HALF

*Examiner*—MR. JITENDRANATH BANERJEE, M.A.

1. 'In Rudra-Śaivism the sentiment of fear is at the bottom, however concealed it may have become in certain developments of it?' Discuss.
2. Give a historical account of the origin and development of the *Vīraśaiva* sect. How far was it a system of social reform among the South Indian Śaivas?
3. 'The two schools (of Kashmir Śaivism) apparently cut themselves off from the old traditional Śaivism.'  
Elucidate.
4. Trace the growth and development of Śakti-worship in ancient India.
5. Write notes on *any two* of the following:—
  - (a) *Guṇonmegadashā*.
  - (b) *Prapattimārga*.
  - (c) The worship of the phallic emblem of Śiva.
  - (d) The sect of Sauras.
  - (e) The Śiva-bhaktas.

## SEVENTH PAPER

Examiners— { DR. NALINAKSHA DATTA, M.A., B.L., PH.D., D.LIT.  
DR. BIMALACHARAN LAW, M.A., PH.D.

*The questions are of equal value.*

*Answer SIX questions only.*

1. Give an account of the religious condition of India at the time of the rise of Buddhism.
  2. Trace the history of the spread of early Buddhism.
  3. What part did women play in early Buddhism? Illustrate your answer by concrete examples.
  4. 'The transition of the Saṅgha from a monarchical type to a republican, its passing somehow, when the teacher dies, into a confederacy of independent members existing side by side, is wholly unknown to the religious system of the Brāhmins.' Explain this statement of Prof. Oldenberg.
  5. Write a short note on the ethical code of early Buddhism.
  6. Mention the events of note in the history of Buddhism between the reigns of Asoka and Kanishka.
  7. Give an exposition of the philosophical views held by the Theravādins, Sarvāstivādins, Mādhyamikas, and Yogācāras.
  8. Bring out the fundamental differences between *Hīnayāna* and *Mahāyāna*.
  9. Discuss the various conceptions of Nirvāṇa as found in the Pāli and Mahāyāna texts.
  10. What evidence, if any, do the Chinese pilgrims furnish about the decadence of Buddhism in India? Point out the causes that led to its disappearance from the country.
  11. What are the chief points of resemblance and of difference between Buddhism and Jainism?
  12. What circumstances favoured the growth of Buddhism into a world religion?
-

## EIGHTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—PROF. BENIMADHAB BARUA, M.A., D.LIT.

*Only THREE questions are to be answered.*

1. State and consider Professor Jacobi's argument in favour of the identification of Niggaṇṭhanāthaputta of Pali tradition with Vardhamāna Mahāvīra revered as the founder of Jainism.

2. What are the common traditions of Jainism and Buddhism, and what light do they precisely throw on the religious and philosophical background and social environment of the two faiths?

3. Who were the Ājīvikas, what were their special beliefs and practices, and what position did they hold in early Indian literature and civilization?

4. Write explanatory and critical notes on *saṃsārasuddhi* and *āhārasuddhi*, indicating how these two terms were conveniently devised and employed to comprehend the whole of the doctrine of the Ājīvikas.

5. What is the Ajīvaka and Jaina conception of *ahiṃsā*? In what respects did it differ from the Buddhist or the Brahmanical idea? Trace the influence of the doctrine of *ahiṃsa* on Asoka's *dharmma*.

6. What do the Jāinas understand by *syādvāda* and *kriyāvāda*, and what is the logical or doctrinal interconnection between the two?

7. Draw an outline of the early history of the Jaina community, noting all points of interest and importance.

## SECOND HALF

*Examiner*—DR. P. C. BAGCHI

1. Write an essay on *one* of the following subjects:—

- (a) Cultural value of early traditions of Jainism.
  - (b) Jaina contributions to Indian Literature.
  - (c) Place of Mahāvīra among the religious thinkers and reformers of India.
  - (d) Jainism—a half-way house between Hinduism and Buddhism.
  - (e) Puruṣottama-vāda as a factor in Jainism.
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## ECONOMICS

**(General Principles of Economics)**

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—MR. P. C. GHOSH, M.A., B.Sc.**Attempt only THREE questions.*

1. Explain clearly what you mean by economic analysis, and discuss its function.
2. 'The theory of distribution applies the theory of value to the various agents of production.' Discuss the statement.
3. 'We must distinguish between increasing, constant, and decreasing supply prices *simpliciter*, and increasing, constant, and decreasing supply prices from the standpoint of the community.' (*Pigou*.) Why should we make this distinction?
4. What do you understand by the Wages Fund theory? Does it contain any element of truth?
5. Who are entrepreneurs in the present economic organization of society? What are their functions?

## SECOND HALF

*Examiner—DR. R. M. CHAUDHURI, M.A., PH.D.**Answer ANY THREE questions.*

1. 'Current economic theory is permeated by the notion that all index numbers come to much the same thing in practice.' Examine this statement by reference to recent changes in the purchasing power of money.
  2. 'Bank-rate does not affect price-levels directly but only indirectly through its influence on one or more of the factors which do appear in the Fundamental Equation.' Explain this statement, and show how Bank-rate can exercise a stabilizing influence upon price-levels.
  3. Discuss the chief features of international gold standard. Examine the conditions upon which its successful working depends. Do you think it advisable to adopt international gold standard in the present world monetary situation?
  4. 'The percentage method of note issue possesses no sound foundations in logic or common sense.' Do you agree with this view of Keynes? Why is it that this method has been adopted by the Indian Reserve Bank?
  5. What do you understand by the term National Dividend? What is the connection between National Dividend and welfare in general? Examine critically the different methods that are adopted to measure the National Dividend of a country.
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## SECOND PAPER

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

## FIRST HALF

*Examiner—MR. D. CHATTORAJ, M.A.*

1. 'Liberty means the absence of restraint upon the existence of those social conditions which, in modern civilisation, are the necessary guarantees of individual happiness.' Explain.

2. Discuss the significance of modern dictatorships. Does their rise indicate that democracy is in crisis?

3. If possible, reconcile the Ideals of Nationalism, Imperialism, and Cosmopolitanism.

4. 'The present system of property is inadequate from whatever angle it is regarded.' Discuss the statement after briefly noting the origin of property.

5. Explain the aspect of Prevention in punishment. Why are extenuating circumstances allowed to influence sentences?

## SECOND HALF

*Examiner—MR. W. C. WORDSWORTH, M.A.*

6. State and discuss the grounds of political obedience. What, in your opinion, is the future of political obedience?

7. 'Since society is essentially federal in nature, the body which seeks to impose the necessary unities must be so built that the diversities have a place therein.' Elucidate.

8. Write a short essay on Equality. Is it possible to reconcile the doctrine of Natural Equality with the fact of Political inequality?

9. 'The State exists to make the moral life possible.'  
In what sense do you interpret this saying? Show how the relation of the State to morality has varied from time to time.

10. In what sense is it true that the State competes for the allegiance of citizens with all other associations in society? What advantages does the State possess over these other associations?

## THIRD PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

## FIRST HALF

*Examiner—MR. S. C. CHAKRABARTI, M.A.*

1. Examine fully the implications of 'Dominion Status'. Discuss the present position of the Irish Free State.



2. 'The Parliamentary system in France is deformed.' What are the chief defects of the French Parliamentary government, and what remedies do you suggest?

3. Give a critical estimate of the working of the Initiative and the Referendum in Switzerland.

4. Write a descriptive and critical note on the judicial powers of Public Departments in Great Britain. To what extent do public servants there enjoy a privileged position in relation to courts?

5. 'The British House of Commons has become a mere body for registering the decree of the Cabinet.' Discuss.

#### SECOND HALF

*Examiner*—DR. P. N. BANERJEE, M.A., D.Sc.

1. What is 'Rule of Law'? Discuss the extent to which the 'Rule of Law' is applicable in India.

2. Discuss the constitutional position and powers of the Secretary of State in regard to the administration of India.

3. Discuss the relations of the Ministers in a Governor's Province in India with (a) the Governor, (b) the Executive Council, and (c) the Legislative Council, under the existing constitution of the country.

In what circumstances, and by what means, may a Minister be removed from office?

4. Examine fully the powers vested in (a) the Governor-General, and (b) the Governors of Provinces, under the New Constitution of India.

5. What are the chief causes of the backwardness of Local Self-government in India? Suggest measures for improving the system.

#### FOURTH PAPER

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

#### FIRST HALF

*Examiner*—MR. D. N. GHOSH, M.A.

1. Indicate some of the devices that are usually adopted to minimize evasion of (a) direct, and (b) indirect, taxes.

2. Why has the problem of Double Taxation assumed greater importance in post war finance? What measures should be adopted to avoid double taxation as between two different countries?

3. Describe the main features of the existing Income Tax in Great Britain. What is the economic justification of the distinction between 'earned' and 'unearned' incomes?

4. Discuss the effect of public debts on (a) the size, and (b) the distribution, of the national dividend.

5. Examine the effect of changes in price level on the burden of public debts.

## SECOND HALF

*Examiner*—MR. S. FINDLAY SHIRRAS, M.A., HON. F.S.S., I.E.S.

1. 'We have to recognize that the financial position in India is not merely a question of the Central Government budget but that Provincial finances also closely concern us . . . . . The need for some special help to Bengal has been recognized in the White Paper and the Government of India is also prepared to accept a similar conclusion.'

*(Speech of the Finance Member of the Govt. of India on introducing the Budget for 1934-35.)*

Carefully discuss this.

2. What are the main characteristics of India's income tax? In what respects does it differ from the British system? What are the points calling, in your opinion, for change in the Indian system?

3. On what occasions would it be permissible for the Government of India to borrow to meet public expenditure?

State carefully the case for and against a much larger expenditure on public works in this country at the present time.

4. Outline the financial proposals for the separation of central from provincial sources of revenue in the White Paper. What modifications have been made in this regard by the Joint Parliamentary Committee?

5. Write a short essay on *one* of the following:—

(a) Regression in the Indian system of taxation.

(b) Some features of Indian public financial administration since the crisis of 1931.

(c) James Wilson as the first and greatest of India's finance ministers.

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## FIFTH PAPER

### (Indian Economics)

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

## FIRST HALF

*Examiner*—SIR J. C. COYAJEE, KT., B.A., LL.B.

1. Discuss the scope for and the methods of the expansion of the activities of Urban Co-operative Banks in India. What lessons can we derive from the history of the development of Urban Banks in Germany and Italy for our guidance in India?

2. How far and on what lines can our Co-operative Central Banks advisedly undertake the tasks of (a) the supervision and inspection of primary societies, and (b) commercial banking?

3. Examine the effects of the present prolonged economic crisis upon the Co-operative movement in Bengal.

4. 'In Bengal the success of Land mortgage banks can be assured by grafting them on to the existing Co-operative Central Banks.' Examine the merits of this suggestion.

5. Show how far the moneylender's financial hold on the agriculturist in India has been shaken as the result of the progress of the Co-operative movement. Can you suggest any ways in which the resources of the moneylender can be utilized so as to assist that progress?

#### SECOND HALF

*Examiner*—DR. J. C. SINHA, M.A., PH.D.

1. 'The gap that now exists between the price of the fibre (jute) and the price of the finished product is disproportionately wide and has indeed been a regular feature of the trade.' (*Report of the Bengal Jute Enquiry Committee*.)

Account for this disparity between the price of raw and manufactured jute in Bengal, and suggest measures for reducing this disparity.

2. Describe how Indian cotton mills are now generally financed in respect of fixed and working capital. What defects do you notice in the present methods of financing, and how would you remove them?

3. Examine the measures which have been adopted in recent years by Government for the encouragement of sugar manufacture and sugar-cane production in India.

4. Trace the influence of the development of Indian railways on our industries. Have the industries been adversely affected by the system of railway rates?

5. Discuss the problems of the indebtedness of industrial workers in India. What remedial measures do you suggest?

#### (GROUP A)

#### SIXTH PAPER

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

#### FIRST HALF

*Examiner*—MR. BINAYKUMAR SARKAR, M.A.

1. Compare the views of Plato and Aristotle on Communism.

2. Compare the Physiocratic doctrine of the 'natural order' with that of Adam Smith.

3. Examine critically Ricardo's theory of value.

4. Give a critical estimate of the position of Marshall in the development of economic doctrines.

5. 'J. S. Mill so qualified and amended the doctrines of Ricardo that the latter could scarcely have recognized them.'

Discuss the statement.

## SECOND HALF

*Examiner*—MR. BIJAYKUMAR SARKAR, A.B.

1. Explain, with reference to British conditions, what you mean by the term industrial revolution. What were the (a) remote, and (b) the immediate, causes of this revolution?
2. Compare the position of the British wage earner to-day with that a century ago.
3. Describe the steps by which free trade was introduced in Great Britain. Why has there been a reaction against it in recent years?
4. Describe the main features of English trade unionism during the period 1845-1875.
5. Outline the main changes in British agriculture since 1850.

## (Banking and Currency)

## SEVENTH PAPER

*The questions are of equal value.*

*Answer THREE questions in EACH half.*

## FIRST HALF

*Examiner*—DR. B. RAMCHANDRA RAU, M.A., PH.D.

1. Why could not *Paris* act as an international financial centre after the recent banking and currency reconstruction during the years 1926-29? What useful lessons can we derive from a study of the French banking system?
2. Point out the salient defects of the Foreign Exchange Banks of our country. What suggestions would you make to remove the defects?
3. Critically examine the India Reserve Bank Act. What changes would you suggest to enable it to satisfy popular aspirations?
4. Explain what you mean by *Rupee bills*. What suggestions do you offer to create *Rupee bills*? Consider in this connection the objections raised by the foreign banking experts. How do you propose to meet them?
5. Contrast the German and English banking systems in respect of their policy towards investment in industry.

## SECOND HALF

*Examiner*—DR. J. C. SINHA, M.A., PH.D.

1. 'The great merit of the gold standard was its logic, not its gold.' Explain this statement.

2. 'Banks are the servants of trade and industry, and must adapt themselves to the needs of their masters.'

(*Rt. Hon'ble R. M'Kenna.*)

Examine the position in India with reference to the newly constituted Reserve Bank.

3. 'A debtor country can have little or no influence on the management of an international currency.' (*Webb.*) Do you agree? Explain with the aid of Indian illustrations.

4. What are the different methods by which the currency authorities exercise control over the working of the credit and currency systems?

5. Examine the principal changes in the banking system of U.S.A. or Germany during the post-war period.

## EIGHTH PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner*—DR. H. C. SINHA, M.Sc., PH.D.

*Answer ANY THREE questions.*

1. 'An ideally perfect unit of general purchasing power is not merely unattainable: it is unthinkable.' Discuss this statement, and show what practical approximations are possible in any particular country at any particular time. Is it theoretically unsound to speak of a general purchasing power of the rupee for the whole of India?

2. Argue the case for and against an immediate linking of sterling with gold. What in your opinion should be the parity if the gold standard is now adopted in England?

3. 'Monetary affairs play a large part, but the trade cycle is neither exclusively monetary, nor due exclusively to monetary causes.' Discuss this statement.

4. Describe any one of the recent expansionist theories of currency, and discuss its validity.

5. 'The history of note issues in different countries is a conflict between the necessity of maintaining convertibility and the necessity for elasticity.'

Discuss this statement, and show how these conflicting aims have been sought to be reconciled.

## SECOND HALF

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions.*

1. Examine the influence of monetary theory and developments in European countries upon the Indian currency system in the nineteenth century.

2. 'There is undoubted disadvantage for India in dependence upon the currency of a single country, however stable and firmly linked to gold.' Examine this statement of the Hilton Young Commission by reference to the monetary policy in India since September, 1931.

3. On what grounds have the recommendations of the Babington Smith Committee of 1919 been criticized? Examine in this connection the views of Sir W. Meyer and Sir L. Abrahams.

4. What do you consider to be the chief reasons for the maldistribution of the world's supply of monetary gold? Can you suggest measures by which this maldistribution may be remedied?

5. Why did Bimetallism cease to be of practical importance after 1900? Would you advocate the adoption of Bimetallism at the present time as a measure for economic recovery?

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**(International Trade)**

## SEVENTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. D. N. GHOSH, M.A.

*Answer ANY THREE questions.*

1. The Theory of International Trade assumes perfect competition within each country and immobility of the factors of production between different countries. But neither of these conditions is fulfilled in practice. Is the theory, therefore, necessarily invalid?

2. In their theory of International Trade the Classical economists were concerned only with the best distribution of a nation's productive resources among different occupations. There is, however, another question—What are the conditions in which these productive resources will be fully employed? Discuss these conditions fully.

3. What factors should be taken into account in stabilizing the external value of a currency? Discuss this problem in relation to sterling at present.

4. Discuss the merits and demerits of Quotas as an alternative to protective tariffs.

5. Discuss the influence of international loans upon (a) the foreign exchanges, (b) the price-levels and (c) the balances of trade of borrowing and lending countries.

## SECOND HALF

*Examiner*—DR. J. C. SINHA, M.A., PH.D.

*Answer ANY THREE questions.*

1. Discuss the effect of the imposition of a protective tariff on (a) the *amount* of national wealth, and (b) its *distribution* within the country.

2. Comment on the following statements:—

(a) 'Complete freedom of trade would bring about an equalization of money wages all over the world.'

(b) 'The more varieties of goods a country can offer for export, the better is its position in international trade.'

3. Discuss the effect on foreign trade of the payment of a large war indemnity by one country to another. Is there any truth in the statement that it is economically more advantageous to give, than to receive such indemnity?

4. Examine the difficulties met with in the interpretation and comparison of foreign trade statistics of different countries.

5. Why did the Genoa Conference of 1922 recommend the establishment of forward exchange markets in countries where no such market existed? Indicate the difficulties in organizing such markets, and discuss the various factors which bring about a difference in 'spot' and 'forward' rates of exchange.

## EIGHTH PAPER

*The questions are of equal value.*

*Answer THREE questions in EITHER half.*

## FIRST HALF

*Examiner*—PROF. J. P. NEOGI, M.A., PH.D.

1. 'The external commercial policy of a country is among the least of the impelling causes of industrial development.'

Illustrate this dictum from the history of protectionism in the U.S.A.

2. Discuss the implications of the principle of equalizing costs as a guide to tariff policy.

3. Examine the effect of protection on the growth of the rayon industry in the U.S.A.

4. Examine critically the validity of the arguments for protection against competition from countries having (a) depreciated currencies, and (b) inferior labour conditions.

5. 'From the point of view of the exporting country, there appears to be no solid economic ground upon which to base an unqualified condemnation of dumping.'

Discuss this statement.

## SECOND HALF

*Examiner*—DR. K. B. SAHA, M.A., PH.D.

1. Give a short account of the tariff policy of the United States from 1816-1828. How far did this tariff policy promote the growth of American industries?

2. Briefly state the protectionist ideas of Bismarck, and explain the circumstances which led to the protectionist reaction in Germany after 1870.

3. Discuss the merits and defects of the conditional form of the Most Favoured Nation Clause in commercial treaties.

4. Give the trend of the tariff policy of India since the outbreak of the last great war.

5. Discuss the incidence of export duties, and estimate their value as a means of protection.

## (Statistics)

### SEVENTH PAPER

*The questions are of equal value.*

*Attempt ANY THREE questions from EACH half.*

## FIRST HALF

*Examiner*—MR. P. C. MAHALANOBIS, B.Sc.

1. Explain the need for interpolation in statistical work, and the assumptions made in using interpolated values. The following table gives



the consumption of a certain chemical in tons per year in a factory.  
Find the missing value for 1927:—

Year	Tons
1923	500
1924	699
1925	1098
1926	1699
1927	.....
1928	3504
1929	4711
1930	6119

2. In the course of anti-malarial work in Birnagore in the 3rd quarter of 1932, quinine was administered to 606 adults out of a total population of 3,540. The incidence of malarial fever is shown below. Discuss the preventive value of quinine:—

	Fever	No-fever	Total
Quinine...	19	587	606
No-Quinine	193	2,741	2,934
Total ...	212	3,328	3,540

The following table gives the five per cent. values of Chi-square for various degrees of freedom:—

$n$ =degrees of freedom	5 per cent. values of Chi-square
1	5.412
2	7.824
3	9.887
4	11.668

3. Write a note on the statistical analysis of time-series in economic studies. Illustrate your remarks with the help of the following table, using in particular 3-years and 5-years moving averages:—

Year	Value	Year	Value	Year	Value
1901	507	1911	572	1921	616
1902	522	1912	569	1922	608
1903	524	1913	567	1923	628
1904	521	1914	587	1924	632
1905	538	1915	583	1925	626
1906	541	1916	581	1926	644
1907	537	1917	599	1927	643
1908	552	1918	602	1928	642
1909	556	1919	597	1929	661
1910	549	1920	612	1930	659

4. In the Pearsonian family of curves, explain clearly the significance of: (a) asymmetry, (b) symmetric and leptokurtic, (c)  $\beta_1 = 0$ ,  $\beta_2 = 3$ , and (d)  $\beta_2$  less than 3.

5. The following table shows the distribution of marks in a School Final Examination. Calculate the coefficient of correlation and its probable error:—

#### MARKS IN GEOGRAPHY.

Range of s	0—20	20—40	40—60	60—80	Total
0—20	32	88	15		135
20—40	45	436	200	4	685
40—60	16	500	398	25	939
60—80		105	532	40	677
80—100		8	40	6	64
Total...	93	1,137	1,185	85	2,500

#### SECOND HALF

Examiner—DR. S. M. GANGULI, D.Sc.

6. A coin is tossed 10,000 times, and head turns up 5,198 times. Is it reasonable to think that the coin is biased?

7. Discuss the use of weights in the construction of Index Numbers, and illustrate your remarks with reference to any well-known Indian index.

8. Explain clearly how you would organize an enquiry into the cost of production of jute in Bengal. Draw up a suitable form and questionnaire for this purpose with comments on their use.

9. The following table gives the distribution of indebtedness in two independent random samples of agricultural families in two different districts:—

Range of indebtedness in rupees per family	NUMBER OF FAMILIES	
	District A	District B
0-40	3	6
40-80	24	35
80-120	52	93
120-160	99	181
160-200	101	73
200-240	78	7
240-280	30	0
280-320	13	0
Total ...	400	400

Calculate the mean values and standard deviations for both samples, and investigate whether the difference in mean values is statistically significant.

10. Write short notes on any four of the following:—

- (a) Statistical populations.
- (b) Inter-censal population.
- (c) Random sample.
- (d) Standard deviation.
- (e) Standardized death-rate.
- (f) Probable error.
- (g) Skewness.
- (h) Quartile difference.
- (i) Probability integral.
- (j) Moment-coefficient.

## EIGHTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. H. C. SINHA, M.Sc., Ph.D.

*Attempt ANY THREE questions.*

1. Draw up *two* independent blank tables, giving rows, columns, and totals, in each case, summarizing the details about the members of a number of families, distinguishing males from females, earners from dependents, and adults from children.

2. For what classes of data is the logarithmic scale useful for the purpose of graphical representation? Give reasons for your answer. Contrast the appearance of various rates of growth on the logarithmic and natural scales. What device would you adopt to distinguish one scale clearly from the other on charts? .

3. What is a logistic curve? How can it be utilized for estimating the population during an intercensal period?

4. If you wanted some details about Indo-British trade during recent years, what official publications would you consult? State the nature of information available in each.

5.  $x$ ,  $y$ ,  $z$  are three correlated variables, each measured from its mean, and  $\sigma_x = \sigma_y = \sigma_z$ ;  $r_{xz} = r_{xy}$

Determine the constants  $a$  and  $b$  in the estimating equation  $z = ax + by + v$ , where  $v$  is a residual such that  $\sum xv = \sum yv = 0$ , the summation  $\sum$  extending to all the values of  $x$  and  $y$ .

Express your result in terms of  $r_{xz}$  and  $r_{xy}$ .

## SECOND HALF

*Examiner*—MR. G. FINDLAY SHIRRAS, M.A., HON. F.S.S.

*Answer ANY THREE questions.*

1. Deduce a formula for the correlation coefficient between  $x/z$  and  $y/z$ .

Discuss the application of this formula to the question of 'spurious correlation'.

2. What is meant by a life table? Show carefully how the census returns and other information collected periodically by Governmental agency are utilized in the construction of such a table.

3. Describe any attempts that have been made at international comparisons of foreign trade, and show the difficulties in such comparisons.

4. Describe the method of compilation and presentation of Indian agricultural statistics. Can you suggest any improvements?

5. What methods are available for determining the number of rupees in circulation? Discuss their validity.

**(Analytical and Mathematical Economics)****SEVENTH PAPER***The questions are of equal value.**Attempt only THREE questions from EACH half.***FIRST HALF***Examiner—Mr. P. C. GHOSH, M.A., B.Sc.*

1. What is Mathematical Method? Examine critically its usefulness in Economics.

2. 'As a rule, exchange-value is at its maximum when value-in-use is zero, and exchange-value is zero when value-in-use is at its maximum.' (*Wicksteed*.)

Comment on this statement.

3. Is the concept of 'consumer's surplus' of any value to you in drawing up an individual's demand curve for a commodity? Point out clearly the implicit assumptions, if any, that you find necessary to make for drawing these demand curves.

4. Discuss the analytical conditions that govern the shapes of Edgeworth's constant utility curves of exchange.

If the constant utility curves are given, can you obtain an integral demand curve out of them?

5. Explain, with the aid of a diagram, the nature of the 'contract curve' in the theory of exchange.

**SECOND HALF***Examiner—Mr. H. C. GHOSH, M.A.*

6. Write a note on the theory of value under imperfect competition.

7. Discuss fully if the problem of two complementary monopolies is incapable of a universal solution.

8. 'The problems presented by interchange between close markets are incapable of being solved without the aid of graphic or analytical methods.' (*Pantaleoni*.)

Comment upon the statement.

9. Show how an increase in the cost of production augments the price of a monopolised commodity.

10. A tax of 1% on a commodity raises its price by 2%. In the absence of any tax, however, an increment of its price of  $\frac{1}{2}$ % restricts the amount of its demand by 1%. Calculate its elasticity of supply.

## EIGHTH PAPER

*The questions are of equal value.*

*Answer ANY THREE questions from EACH half.*

## FIRST HALF

*Examiner—MR. P. C. GHOSH, M.A., B.Sc.*

1. 'Since Marshall we are aware of the fact that given certain cost conditions an increase in demand may be followed by a fall in price. But neither the Marshallian, nor . . . any other theoretical system left room for the possibility that, under certain market conditions, an increase in the number of sources of supply (an inflow of resources into the "industry") could lead to a rise in prices.' (*Nicholas Kaldor.*) Discuss.

2. Examine critically how far the Marginal Productivity Theory can determine the entrepreneur's remuneration.

3. 'Whatever improvements in the supply of commodities lengthen the average interval between the moment when labour is exerted and its ultimate result or purpose accomplished, such improvements depend upon the use of capital.' (*Jevons.*)

Comment on this statement, and examine the nature and function of capital according to Jevons.

4. Can there be rent apart from qualitative differences in lands cultivated at the same time?

5. When is the law of increasing returns supposed to prevail in the railway industry? Point out the different senses in which the term is used, and analyze the various conditions that are attended with this attribute.

## SECOND HALF

*Examiner—MR. H. C. GHOSH, M.A.*

6. Discuss the possible cases of opposition between social net product and private net product.

7. Examine the various hindrances to the realization of maximum net product due to the relative variability of industry.

8. 'The apparent conflict between mathematical analysis and experience, which has sometimes perplexed the treatment of increasing returns, may be resolved even without reference to the time element, if the assumptions from which the mathematical analysis starts are brought more nearly into conformity with the facts.' (*Pigou.*) Discuss.

9. Explain clearly how you would distinguish between unstable equilibrium, neutral equilibrium, and stable equilibrium in many-firm industries.

10. Show that, except in industries which make use of imported materials of increasing supply price, the output proper to simple competition is equal to or less than the ideal output.

**(Modern Economic Development)****SEVENTH PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. P. SINHA, M.A.**Answer ANY THREE questions.*

1. Explain clearly the causes that led to a comparatively rapid development of Indian industries during and after the Great War. 16
2. What do you think to be the causes and consequences of the recent adoption of protection in India? 16
3. Sketch briefly the history of the development of *any two* of the following industries in India:— 16  
(a) Jute, (b) Cotton, (c) Sugar, (d) Iron, and (e) Tea.
4. Explain fully the part played by foreign capital in the economic development of India. 16
5. What steps have been taken by the Government to develop agriculture in India? How far have they been successful? 16

**SECOND HALF***Examiner—DR. P. C. BASU, M.A., PH.D.**Attempt ANY THREE questions.*

1. Trace the history of any of the cotton growing areas within the Empire during the last fifty years, especially showing the effects of (1) improved methods of agriculture and marketing, (2) improved means of transportation, and (3) mechanization of industries.
  2. Describe the economic advantages to Great Britain from its African colonies and the economic rivalry, especially in tariffs, between Great Britain on the one hand and Germany and France on the other during the opening years of the present century.
  3. Summarize and critically examine the economic arguments against free migration of labour within the Empire. Illustrate your answer from examples in Fiji and South and East Africa.
  4. Explain the reasons why British Malaya has become so important to the Empire during the last quarter of a century.
  5. Briefly describe the progress in manufacturing industries in the U.S.A. since the Civil War. How has it affected foreign trade of the country, and what economic problems have arisen as a result of this?
  6. Outline the growth of industrial combination in the U.S.A. To what extent is it due to normal economic forces, and what measures have been adopted to control it?
  7. Briefly explain the causes of the present economic depression in the U.S.A. Critically examine the measures recently adopted.
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## EIGHTH PAPER

*The questions are of equal value.*

*Attempt only THREE questions in EACH half.*

## FIRST HALF

*Examiner—MR. V. G. KALE*

1. Examine critically the statement that cartels are a unique product of the economic soil of Germany, and show what part these organizations have played in the industrial development of that country.
2. Trace the growth of French industry and trade between 1871 and 1914, and bring out clearly the distinguishing features of the national economy of France.
3. Show how natural and political conditions influenced the economic development of Italy during the nineteenth century.
4. Account for Germany's rapid industrial advance in the four decades that preceded the outbreak of the Great War.
5. Point out the striking changes which have taken place in the economic organization of Italy since the close of the World War.

## SECOND HALF

*Examiner—DR. H. L. RAY, M.A., PH.D.*

1. Give an account of the First Five Year Plan of the Soviet Union.
2. Discuss the population problem of Japan, and indicate the lines along which its solution is being attempted.
3. Trace the origin and development of the Labour Movement of Japan.
4. Describe the main features of labour legislation in Czechoslovakia since 1918.
5. Give an account of the post-war agrarian reforms in Bulgaria, Rumania, and Czechoslovakia.

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(GROUP B)

## SIXTH PAPER

**(History of Political Thought)**

*The questions are of equal value.*

## FIRST HALF

*Examiner—MR. N. C. BHATTACHARYYA, M.A.*

*Answer ANY THREE questions.*

1. Indicate the factors which influenced the political thought of Plato. How far are you prepared to regard Plato's *Republic* as an entirely original treatise?



2. Discuss the following passage: 'But I fancy when he that is by nature a craftsman or a moneymaker of some kind is so elated by his wealth, or his large connections, or his bodily strength or some such qualities, that he essays to enter the warrior class; or when one of the warriors aspires to the counselling and guardian class when he is unworthy of it, and these take one another's tools and privileges, or when the same man tries to combine all these offices, then, I fancy, you think with me that such change and meddling among those classes is death to the city?' (*Plato's Republic*.)

3. Critically examine the scope of State activity in the systems of Plato and Aristotle respectively, with special reference to modern ideas.

4. 'But a State exists for the sake of good life, and not for the sake of life only.' (*Aristotle's Politics*.) Comment on this passage, and show how far the theory has influenced medieval and modern political thought.

5. Trace the growth of democratic ideas in the Middle Ages.

## SECOND HALF

Examiner—MR. K. N. SEN, M.A.

Answer ANY THREE questions.

1. 'Therefore a wise lord cannot, nor ought he to keep faith where such observance may be turned against him and when the reasons that caused him pledge it exist no longer. If men were entirely good, this precept would not hold, but because they are bad, and will not keep faith with you, you too are not bound to observe it with them . . . and he who has known best how to employ the fox has succeeded best.' Who do you think wrote these lines? Comment on this passage critically, and refer to ancient and modern political philosophers who have held similar views.

2. 'The Reformation stimulated two contradictory tendencies in the history of political thought.' Elucidate this statement.

3. Formulate the political theory contained in the following passages:—

(a) 'Whatever then, he removes out of the state that nature hath provided and left it in, he has mixed his labour with it, and joined to it something that is his own, and thereby makes it his property.'

(b) 'Thus, the grass my horse has bit, the turfs my servant has cut, and the ore I have digged in any place, where I have a right to them in common with others, become my property without the assignation or consent of anybody.'

(c) 'As much as anyone can make use of to any advantage of life before it spoils, so much he may, by his labour fix a property in. Whatever is beyond this is more than his share, and belongs to others.'

4. Indicate the growth of political thought in England in the seventeenth century.

5. (a) 'To renounce liberty is to renounce being a man, to surrender the rights of humanity and even its duties.' (*Rousseau*.)

(b) 'In order then that the social compact may not be an empty formula, it tacitly includes the undertaking, which alone can give force to the rest, that whosoever refuses to obey the general will shall be compelled to do so by the whole body.' (*Rousseau.*)

Examine together the above passages. Do you think they are contradictory? Give your reasons fully.

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## (Comparative Politics)

### SEVENTH PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

#### FIRST HALF

*Examiner*—MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

1. How does the doctrine of the separation of powers operate in the constitutions of (i) England, (ii) India, (iii) France, and (iv) the U.S.A.?

2. 'The Colonial Laws Validity Act, 1865, is a charter for the colonies.' (*Keith.*) Does the Statute of Westminster, 1931, accept that view?

3. 'The Congress in the U.S.A. does not receive the attention and enjoy the confidence which ought to belong to a central organ of national life.' (*Bryce.*) Discuss.

4. How does the House of Commons in England maintain its control over the national purse?

5. Discuss the validity of the following acts:—

- (a) Mr De Valera's abolition of the Oath to the Crown.
- (b) The attempt on the part of New South Wales to repudiate the war-debt.
- (c) The proposal for the abolition of the 'native vote' in the Cape Colony.
- (d) The refusal by Ceylon to be guided by the 'Ottawa Agreement'.

#### SECOND HALF

*Examiner*—MR. D. N. BANERJEE, M.A.

1. Examine Sir Henry Maine's theory in regard to the 'primeval condition of the human race'.

2. Describe the salient features of the Athenian democracy. Discuss in this connection the essential points of difference between the modern conception of the State and the ancient.

3. Discuss the constitution, position, and powers, of the Federal Executive in Switzerland, contrasting them with those of the British Cabinet and of the Federal Executive in the U.S.A.

4. Discuss the nature and causes of the influence (if any) which English political institutions have exercised upon the political institutions of other countries.

5. Discuss the characteristics of—

- (a) a Personal Union,
- (b) a Real Union,
- (c) a Confederation,
- (d) a Federal Union.

Illustrate your answers.

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## EIGHTH PAPER

*The questions are of equal value.*

*Examiner—DR. U. N. GHOSHAL, M.A., PH.D.*

*Answer ANY THREE questions.*

1. What were the chief features of the political constitution of ancient Sparta? In what sense may it be called a balanced constitution?

2. Write what you know of the principal administrative offices functioning under the Athenian democracy. Comment in this connection on the dictum 'The modern theory of party government was never distinctly recognized in Athens.'

3. Discuss the origin of the concepts *Jus Gentium* and *Jus Naturale*, and explain the significance of the part played by them in the development of political thought.

4. Trace the successive stages of development of the constitution of mediæval Florence. How far may this development be regarded as typical of the Middle Ages?

5. Distinguish the different types of Ancient Indian republics, and illustrate your answer with as many concrete examples as you can.

## SECOND HALF.

*Examiner—MR. N. C. CHATTERJEE, M.A., B.L., BAR-AT-LAW.*

*Answer ANY THREE questions.*

1. 'The Roman Empire is commonly regarded as the transition from ancient to mediæval and modern history.' Discuss.

2. Institute a comparison between mediæval Italian city communities with the city-states of ancient Greece.

3. 'Feudalism afforded a temporary scaffolding upon which organized society could grow.' Expand.

4. What are the noticeable features in the polity described by Kautilya? What are his contributions to political science?

5. 'A federal association is a political unit which is itself an aggregate of units; it is something less than a nation and something more than a league.' How far does this test apply to the Achæan and the Aetolian Leagues?

### (Sociology)

#### SEVENTH PAPER

*The questions are of equal value.*

#### FIRST HALF.

*Examiner*—MR. BINAYKUMAR SARKAR, M.A.

*Answer ANY THREE questions.*

1. (a) Describe the health movement in India, and compare it with that in England or France.

(b) Write notes on *any three*: (1) Workmen's Compensation Act, (2) Indian Jails Committee, (3) organic basis of criminality, (4) eugenic propaganda, (5) feminism, (6) poor law.

2. (a) Indicate the important landmarks in Indian social policy from Rammohan to Asutosh.

(b) Discuss the nature of Indian population movements with regard to (1) emigration, and (2) internal migrations.

3. (a) How far is it possible to connect crime with (1) race, (2) occupation, and (3) earning?

(b) Analyze briefly the contributions of (1) Durkheim and Hobhouse or (2) Gumplovicz and Ward to social thought.

4. (a) Compare the following groups from the standpoint of vital statistics: (1) the Munda-Oraon-Santal, (2) the Kayastha-Brahman-Vaidya, and (3) the Mussalman.

(b) Examine the occupational structure of any two European countries throwing light on India's points of contrast or affinity.

5. (a) Describe the British or the German system of invalidity insurance.

(b) Write a short account of educational institutions in Bengal, indicating how they differ from the Japanese system.

#### SECOND HALF.

*Examiner*—DR. RADHAKAMAL MUKHERJEE, M.A., PH.D.

*Answer ANY THREE questions.*

1. Account for the paucity of females among the Hindus, especially of the higher social grades. What have been its effects on their natural increase?

2. Examine and explain the taboos in respect of woman's labour outside the home. What have been its effects on woman's status and the marriage dowry?

3. Examine and illustrate how the functional castes in India reflect the natural process of an upward economic movement. Distinguish in this connection between a caste and a class.

4. What differences are to be found in the forms of rural settlement in different parts of Northern India?

5. Discuss fully the causes of the increase of criminality in our new industrial cities.

6. Estimate the chief contributions of the aboriginal tribes to the culture and social economy of Bengal.

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## EIGHTH PAPER

*The questions are of equal value.*

### FIRST HALF.

*Examiner—MR. K. N. SEN, M.A.*

*Only THREE questions are to be answered.*

1. 'Of all these writers, M. Tarde and Professor Durkheim unquestionably have most nearly succeeded in the attempt to discern the essential nature of social phenomena and to state the first principle of sociology.' (*Giddings*.) Critically evaluate the theories of Imitation, Suggestion, and Sympathy, as the fundamental principles of all social phenomena, and explain the reasons why Professor Giddings rejects these theories in favour of his theory of the Consciousness of Kind.

2. Explain the character of the Social Mind and its function in relation to the social organization. What new light has been thrown on it by recent studies in crowd psychology?

3. Critically examine the idea of Progress, and indicate its different stages. How far, if at all, are you prepared to support the theory of social degeneration?

4. Trace the importance and social significance of play and festivity from savagery down to civilization. How does it transform modes of conflict?

5. Explain the origin of the metronymic tribe, and trace the transformation of the metronymic form of relationship into the patronymic, carefully evaluating the factors that have aided the process.

### SECOND HALF.

*Examiner—MR. K. N. SEN, M.A.*

*Only THREE questions are to be answered.*

1. Discuss the theory of the early promiscuity of the sexes and the evidence on which it is based. What is the future of marriage?

2. What are the chief characteristics of the Classificatory System of Relationships? Was Morgan right in stating that the system originated in a condition of group marriage? Give reasons.

3. Explain the rôle of the horde, the clan, and the tribe, in the evolution of society. How does the national idea originate, and what are its achievements?

4. Give a critical estimate of the idea of property among primitive peoples, with suitable illustrations.

5. Write short notes on *any two* of the following :--

- (i) The Dual Organization.
- (ii) The Iroquois Confederacy.
- (iii) The Arunculate.

## (International Law)

### SEVENTH PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner*--MR. S. C. CHAKRABARTI, M.A.

*Answer ANY THREE questions.*

1. 'The grandest function of the law of nature was discharged in giving birth to modern International Law.' Discuss.

2. What is the extent of the 'territorial sea'? Has a littoral State the right to go outside the territorial sea to enforce its laws?

3. Describe the organization and functions of the Permanent Court of International Justice. Estimate the value of the work so far done by it.

4. Examine the juridical character of the doctrine of *Rebus sic stantibus*. To what extent does Art. 19 of the Covenant lend support to this doctrine?

5. Write notes on the International position of *any three* of the following :--

- (i) Palestine.
- (ii) Tangier.
- (iii) Mongolia.
- (iv) Ireland.
- (v) Switzerland.

#### SECOND HALF.

*Examiner*--MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

*Answer ANY THREE questions.*

6. 'It was not until the foundation of the League of Nations, in 1919, that any real attempt was made to embody in actual law the cardinal principle of Grotius's system.' (*Brierley*.)

Discuss.

7. Discuss the methods short of war open to International Law for the settlement of disputes between States.

8. What sanctions can the League of Nations claim or enforce in case any member of the League resorts to war in disregard of the 'covenants'? Are such steps available against non-members?

9. Write notes on *any three* of the following:—

(a) Postliminium, (b) functions of the International Court of Arbitration, (c) Vattel, (d) interoceanic canals, (e) recognition of belligerency and recognition of insurgency.

10. Answer *any three* of the following:—

(a) A German warship during the last world-war sank a Dutch merchantman at sight. What remedies were open to the Dutch Government against Germany?

(b) The Russian Ambassador to London is denied recognition. Has the Russian Government any remedies against England?

(c) In times of peace, the French Government declines to admit the king of another country within her territories as an undesirable alien. Has that country or its king any remedies against France?

(d) The ruler of an Indian State goes to Belgium and commits (i) a murder, (ii) an act of bigamy, there. Can the Courts in Belgium take any steps against him?

## EIGHTH PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

### FIRST HALF.

*Examiner*—MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

1. Explain the doctrine of 'Continuous Voyage.' How far did the Declaration of London attempt to sanction it? To what extent did it suffer from the shocks of the last world-war?

2. 'The right of blockade is founded not on any general unlimited right to cripple the enemy's commerce with neutrals by all means effectual for the purpose.' (*The Francisca*, 1855.) How far was this principle observed in (i) the Anglo-French blockade of Germany, (ii) the German submarine blockade of England?

3. Discuss the law relating to the transfer of merchant vessels from belligerent to neutral flag.

4. Write notes on *any three* of the following:—

- (a) Daimler Co., Ltd. v. Continental Tyre and Rubber Co., Ltd.
- (b) The 'Zamora'.
- (c) The 'Harmony'.
- (d) The 'Leonara'.

5. Discuss the legality or the validity of *any three* of the following :—

- (a) The Germans employed Belgian (i) non-combatants, (ii) prisoners of war, as guides during their occupation of (1) Belgian territory, (2) French territory.
- (b) The Germans forbade the exhibition of Belgian national flag as 'grave provocation' and prohibited the singing of national anthems in Belgian schools during their occupation of Belgium.
- (c) Mines were planted by the belligerents in the open waters of the North Sea during the last world-war. Would your answer be different if they were sown in the territorial waters of the belligerents?
- (d) A Lieutenant Colonel in the army at Luxemburg was made to drain swamps in Luxemburg and was transferred to Germany and was there obliged to work in a cotton mill.

#### SECOND HALF.

*Examiner*—MR. B. N. BANERJEE, M.A.

6. State the rules of International Law relating to bombardments (i) on land, (ii) at sea, and (iii) from the air.

7. Distinguish between absolute contraband and conditional contraband. How far was the distinction maintained during (i) the Russo-Japanese War, (ii) the last world-war?

8. Discuss fully the effect of war on (i) contracts, (ii) partnerships.

9. 'It is an established rule of International Law that, in general, enemy private property captured at sea is liable to capture and condemnation.' (*Garner*.) Discuss. Are there any exceptions to this rule regarding (a) ships, (b) goods?

10. Answer *any three* of the following : —

- (a) In war, country X occupies country Y. (i) suppresses the constitution of country Y, (ii) suspends the laws in force in that country, (iii) compels the universities of country Y to adopt the language of the occupant. Discuss the legality of these measures.
  - (b) Country X holds mandate over country Y under the treaty of Versailles. In the course of administration, representatives of country X massacre a thousand citizens of country Y without a just cause. Has country Y any remedy?
  - (c) Can the League of Nations take cognizance of a Hindu-Moslem riot in India? Can the Moslems appeal to the League as a 'minority community'?
  - (d) Discuss the legality or the validity of (i) the Anglo-French occupation of Salonika or (ii) the Japanese occupation of Tsing-tao, during the last world-war.
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**(Constitutional Law)****SEVENTH PAPER***The questions are of equal value.**Answer THREE questions from EACH half.***FIRST HALF.***Examiner—*MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.

1. What is the constitutional status of the Indian States *vis-à-vis* the Government of India? How does it compare with the status proposed in the contemplated federation?

2. 'The Colonial Laws Validity Act, 1865, is regarded as a charter for the colonies.' Why? How far does the Statute of Westminster accept that view?

3. 'The Dominions are distinct units or States from the point of view of International Law.' (*Keith.*) Do you agree?

4. How far is it true to say that the Judicial Committee of the Privy Council is the symbol of the unity of the British Empire?

5. Answer any three of the following:—

(a) Can the Governor-General for Canada refuse to dissolve the Canadian Parliament when urged to do so by the Canadian Premier?

(b) Can the ministry in the Union of South Africa advise the Crown directly in the matter of the appointment or the recall of its Governor-General?

(c) Can the Government of the Union of South Africa abolish 'native vote' in the Cape Colony? If so, how?

(d) Can the Executive Council in the Irish Free State abolish the Seanad? If so, how?

**SECOND HALF.***Examiner—*DR. D. N. SEN, M.A., PH.D.

6. How far can (i) the Emergency Powers Act, 1920, (ii) the Church of Assembly Powers Act, 1919, be regarded as inroads on the omnipotence of Parliament in England?

7. Analyze clearly the functions of the House of Lords as a judicial tribunal.

8. How does the writ of Habeas Corpus secure the liberty of the subject in England.

9. How does the House of Commons exercise its control over the national purse?

10. Attempt any three of the following:—

(a) Can the Crown in England by the exercise of prerogative create new Courts in (i) England, (ii) a colony?

- (b) Can the Courts in England adjudicate upon the validity or otherwise of a committal for contempt by an order of the House of Commons?
- (c) Can the Prime Minister of England dismiss any of his colleagues in the Cabinet?
- (d) Can the Crown in England proclaim martial law in England in time of (a) war, (b) peace?

### EIGHTH PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

#### FIRST HALF.

*Examiner—DR. U. N. GHOSHAL, M.A., PH.D.*

1. 'Administrative law is part of public law.' (*Goodnow.*) How does it differ from constitutional law?
2. 'Laws, Judicial decrees, and other public acts of one State have no legal force *ex proprio vigore* in the judicial tribunals of another State.' (*Willoughby.*) Discuss.
3. Describe the functions of the following officials:—
  - (i) The Justice of the Peace in England.
  - (ii) The Prefect in France.
  - (iii) The District Attorney in U.S.A.
4. How far is it true to say that the executive legislate in (i) England, (ii) France, (iii) U.S.A.?
5. Discuss the general features of the American system of local administration.

Or,

Describe the functions of the Council of State in France as an administrative body and as a tribunal of justice. How does the American Executive Council compare with it?

#### SECOND HALF.

*Examiner—MR. N. C. CHATTERJEE, M.A., B.L., BAR-AT-LAW*

6. Explain carefully the importance of *any four* of the following for constitutional practice in Great Britain:—

*Attorney-General v De Keyser's Hotel, Ltd.*  
*Bradlaugh v Gosset.*  
*Stockdale v Hansard.*  
*Art O'Brien's case.*  
*Wolfe Tone's case.*  
*Denning v Secretary of State for India.*

7. 'Above the liberty of the subjects is the safety of the realm.'

What influence has this doctrine had on constitutional practice in the British Empire?

8. What is the position of the Home Office in the British administrative system?

9. Write short notes on :—

*Lair Lords.*

*Judicial Committee of the Privy Council.*

*Delegated Legislation.*

*Assizes.*

*Referendum.*

*Functions of the India Office.*

10. Examine the view that the existence of the Judicial Committee of the Privy Council constitutes a derogation from the autonomy of the Dominions.

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## COMMERCE

### FIRST PAPER

#### (Realistic Economics)

*The questions are of equal value.*

#### FIRST HALF.

*Examiner—MR. P. C. GHOSH, M.A., B.Sc.*

*Answer only THREE questions.*

1. Account for the causes of the decadence of Britain's industrial leadership in recent times.

2. 'The volume of foreign trade is a fairly good measure of a country's prosperity.' Examine this statement.

3. Explain the chief principles of scientific management and its effects on (a) output, and (b) price.

4. Distinguish between 'constructive' and 'manipulative' speculation, and indicate their chief advantages and disadvantages.

5. Give a short account of the evolution of the Trust movement in the United States. Is a trust necessarily injurious to the interests of the consumer?

#### SECOND HALF

*Examiner—MR. BIJAYKUMAR SARKAR, A.B.*

*Only THREE question to be attempted.*

1. What is meant by inflation of currency? What are the evidences and economic consequences of such inflation?

2. Explain the mechanism by which a Central Bank may control the price level. How far, in your opinion, can such control be effective?

3. 'High wages and high prices do not go together, either as regards international commodities or domestic commodities.' Discuss this statement.

4. What do you think of the statement that the course of prices in a country is not only sensitive to, but is dominated by, the international movement of specie?

5. Do you subscribe to the opinion that currency depreciation inevitably leads to a bounty on exports? Give reasons for your answer.

## SECOND PAPER

### (Accountancy)

*The questions are of equal value.*

#### FIRST HALF

*Examiner—MR. N. C. CHAKRABARTI, M.A., A.S.A.A.(LOND.)*

*THREE questions are to be attempted.*

1. (i) *AC, BC, and CC* were in partnership and shared profits as *AC*: 50%, *BC*: 33 $\frac{1}{3}$ %, and *CC*: 16 $\frac{2}{3}$ %. They decided to dissolve partnership as on Dec. 31, 19... During the realization of the assets, *CC* was adjudicated a bankrupt and no contribution from him towards his share of the firm's deficiency was found to be possible.

The Balance Sheet of the firm as on Dec. 31, 19... was as shown below:—

The Capital A/cs of the partners were originally *AC*—Rs. 100,000, *BC*—Rs. 80,000, and *CC*—Rs. 10,000, but by subsequent yearly adjustments made by agreement between the partners at the annual accounting periods the Capital Account balances had been reduced as shown in the Balance Sheet:—

*Balance Sheet as at . . . .*

	Rs.	Rs.		Rs.
<i>AC, BC, and CC.</i>			Leasehold Factory	30,000
Capital A/cs:—			Plant and Machinery	38,000
<i>AC</i> ...   60,000			Fixtures and Fittings	3,200
<i>BC</i> ...   30,000			Stock           ...	26,800
			Sundry Debtors	41,140
		90,000	Cash           ...	1,000
Sundry Creditors		52,140	<i>CC</i> Capital A/c	2,000
		<u>Rs. 1,42,140</u>		<u>Rs. 1,42,140</u>

The Assets realized as follows:—

Leasehold—Rs. 24,600, Plant and Machinery—Rs. 20,000, Fixtures—Rs. 1,000, Stock—Rs. 20,000, Book Debts—Rs. 27,100. A contingent liability of Rs. 2,000 materialized during realization.

You are required to close the books of the Firm in accordance with the ruling given in *Garner v. Murray*.

Assume the expenses of realization amounted to Rs. 620.

(ii) What difference would it make in the final result if the ruling given in *Garner v. Murray* did not apply?

2. (a) The accounts of the East India Engineering Syndicate, Ltd., show for 1934 the following:—

	Rs.
Materials used	20,00,000
Direct Wages	18,00,000
Works Overhead Expenses	2,70,000
Establishment and Genl. Exp.	2,44,200

You are required to show: the factory cost, the total cost, the percentage that the works overhead cost bears to Direct Wages, and the percentage that the establishment and general expenses bear to the factory cost.

(b) What price should the company quote to manufacture a machine which it is estimated will require—

	Rs.
Materials	10,000
Wages	7,500

so that there may be a profit of 25% on the total cost and 20% on the selling price?

3. (a) A company with a paid-up capital of Rs. 2,00,000 in Rs. 100 shares having accumulated a reserve of Rs. 60,000 resolves to capitalize Rs. 40,000 of it by issuing to the shareholders 400 bonus shares of Rs. 100 each fully paid, each shareholder to receive one bonus share for every five shares held in the company.

You are requested to record the above transactions in the books of the company.

(b) Give a Pro-forma Revenue Account of a Life Assurance Company, and illustrate your answer by means of your own figures.

4. (a) State the points of difference between a Balance Sheet and a Statement of Affairs (Bankruptcy).

Illustrate your answer by means of pro-forma examples.

(b) State how you would deal with the following in the books of X Co., Ltd.:—

- (i) Preliminary expenses—Rs. 1,500.
- (ii) Premium on shares—Rs. 5,000.
- (iii) Premium Rs. 50,000 paid for 25 years' Lease of Premises.
- (iv) Rs. 10,000 spent on the structural alterations of the above premises.

5. (a) J. Jones keeps his books by the single entry method. He instructs you to prepare a Trading Account, Profit and Loss Account, and a Balance Sheet from his books.

Describe the steps you would take to carry out your instructions.

(b) C. Bose keeps his books by Single Entry Method. His position on 1st January, 1930, was as follows:—

			Rs.	As.	P.
Cash in hand	...	...	125	8	0
Cash at Bank	...	...	1,500	0	0
Sundry Debtors	...	...	6,000	10	0
Machinery and Plant	...	...	15,000	0	0
Sundry Creditors	...	...	7,500	14	0
Furniture and Fixtures	...	...	750	0	0
Stock-in-Trade	...	...	7,000	8	0

His Drawings during the year amounted to Rs. 3,000. On 31st December, 1930, his position was as follows:—

			Rs.
Machinery and Plant	...	...	20,000
Sundry Debtors	...	...	10,000
Stock-in-Trade	...	...	11,000
Cash in hand	...	...	175
Bank Overdraft	...	...	750
Sundry Creditors	...	...	9,000

From the above particulars prepare a statement of Profit for the year ending 31st December, 1930, after making the following adjustments:—

Machinery to be depreciated at  $7\frac{1}{2}\%$ ; Rs. 250 of the Debts are considered irrecoverable.

## SECOND HALF

*Examiner*—MR. RANAJIT RAY, M.A., A.C.A., F.R.E.S.

*Question 5 and ANY TWO other questions to be attempted.*

1. Mr. Chatterjee who was carrying on business as Chatterjee & Co. died on the 31st May, 1935, and his son was appointed the executor of his estate. The following Balance Sheet of the business was prepared:—

*Balance Sheet as at 31st May, 1935.*

	Rs.		Rs.
Trade Creditors	5,320	Plant and Machinery	5,200
Loans	8,000	Furniture and Fittings	1,600
Deposits	7,500	Motor Car	2,300
Sundry Liabilities:—		Stock	8,730
Wages	350	Debtors	9,600
Rent	200	Security Deposit	2,000
Income Tax	1,270	Payment in Advance	200
Capital A/c	16,700	Cash in Hand	200
		Cash at Bank	9,510
	<hr/>		<hr/>
	39,340		39,340

The Executor decided to sell this business to some friends of Mr. Chatterjee who formed a company called Chatterjee & Co., Ltd., with an authorized capital of Rs. 1,00,000 divided into 10,000 shares of Rs. 10 each, of which 6,000 shares were issued. Of these 6,000 shares,

4,000 were fully called up and paid up and 2,000 were Rs. 5 called up and paid up. It was arranged that the new company would take over the goodwill and the assets of the business except Cash and the debtors. The Motor Car was valued at Rs. 2,000 and the Furniture and Fittings at Rs. 1,500 for the purpose of this transfer. So far as the liabilities were concerned the company would take over only the trade creditors, and the purchase price was fixed as Rs. 20,000 cash and this was paid. It was also agreed that debts would be realized by the company and the sundry liability paid by them on behalf of the executor, and it was found that the debts actually realized only Rs. 8,500.

You are required to prepare a Balance Sheet of Mr. Chatterjee's business after the above has taken place, and also the Balance Sheet of Chatterjee and Co., Ltd.

2. On the 1st June, 1935, Mr. Bose draws a bill on Mr. Sen, and Mr. Sen on Mr. Bose for Rs. 10,000 each at 3 months without grace. They accept each others bills agreeing to meet his own acceptance on maturity, and each discounts his bill at 6%. Mr. Bose meets his own acceptance on due date, but Mr. Sen fails to do so, and Mr. Bose as drawer has to take it up and pay bank charges Rs. 10. Mr. Sen, however, agrees on due date to accept a bill for the amount due with cost and interest at 12% at 3 months (without grace) and this is discounted by Mr. Bose at 5% and is met on due date by Mr. Sen. Show all the entries for these transactions in Mr. Bose's and Mr. Sen's books.

3. *A* in Calcutta and *B* in Madras have been competing in Bombay in the same commodity. With a view to safeguarding their interest they agree to deal jointly in the Bombay market by consigning goods there jointly to '*C*' as agent for sale. They agree that profits on the joint consignment *A/c* should be shared in proportion to the quantities despatched by *A* and *B* respectively. You are required from the following information to prepare the joint venture *A/c*, and show how much *A* and *B* received respectively.

*A* despatched 3,250 maunds at a cost of Rs. 30 per maund and paid railway freight at Rs. 1-8 per maund and insurance Rs. 325 and loading and petties Rs. 325.

*B* despatched 1,750 maunds at a cost of Rs. 25 per maund and paid railway freight at Re. 1 per maund and other charges Rs. 475.

*C* sold the goods in Bombay at the following rates and paid expenses for unloading and cartage at Re. 1-8 per maund, Godown rent Rs. 800, Insurance Rs. 270, Delivery Expenses Rs. 600, Brokerage at 1%, and his own Commission at 5%.

Rates of Sale:—

	Rs.
1,000 maunds @	50
500 do. @	45
1,000 do. @	46
1,000 do. @	42
500 do. @	40
1,000 do. @	39

Give your opinion as to whether *A* or *B* has got the better return, and why.

4. Mr. Chatterjee, whose income is derived from House property, has the following properties. From the particulars given, work out his return for income tax:—

(1) No. 6 Tolly's Road. Rent Rs. 200 per month, let the whole year. Ground rent Rs. 100 and insurance paid Rs. 200.

- (2) No. 5 Church Road. Rent Rs. 600 per month, let for 9 months, repairs paid Rs. 2,600, and insurance paid Rs. 400.
- (3) No. 2 Maidan Road. Rent Rs. 350 per month, let the whole year, repairs paid Rs. 600, and insurance paid Rs. 200.
- (4) He employs a durwan at Rs. 16 per month to collect his bills.
5. From the particulars given below of the General Trading Co., Ltd., you are required to prepare a Balance Sheet and Trading and Profit and Loss A/cs after making the following adjustments:—

- (1) Depreciate: Land and Buildings 1%.  
Furniture and Fittings 10%.
- (2) Write off 20% of Preliminary Expenses.
- (3) Provide final Bad debts reserve of 5% on outstanding Debtors.
- (4) Closing Stock Rs. 1,10,000.
- (5) Liability for salary of Rs. 4,000.  
" for Printing Rs. 320.  
" for Repairs Rs. 1,300.

Capital 5,000 shares of Rs. 60 each fully paid up, 1,000 Preference 6% shares of Rs. 100 each fully paid up.

	Rs.
Debentures 6% ... ..	2,00,000
Goodwill ... ..	1,00,000
Land and Buildings ... ..	1,00,000
Plant and Machinery ... ..	1,00,000
Creditors ... ..	1,25,000
Bad Debts Reserve ... ..	5,000
Sales ... ..	8,25,000
Outstanding Debtors ... ..	1,50,000
Bills payable ... ..	20,000
Sundry Receipts ... ..	120
Preliminary Expenses ... ..	6,000
Cash in Hand ... ..	20,000
Cash at Bank ... ..	2,10,000
Bills Receivable ... ..	33,820
Opening Stock ... ..	2,20,000
Purchases ... ..	4,50,000
Carriage Inwards ... ..	21,000
Delivery Charges ... ..	33,000
Salaries ... ..	52,000
Taxes and Rates ... ..	6,000
Insurance ... ..	4,000
Sales Returns ... ..	11,000
Preference Div. Paid ... ..	3,000
Bad Debts ... ..	3,300
Bank Int. Paid ... ..	1,200
Repairs Paid ... ..	2,600
Postage and Telegrams ... ..	2,100
Stationery and Printing ... ..	8,900
Circulars ... ..	1,300
Advertisements ... ..	12,600
Discounts allowed ... ..	2,300
Purchase Returns ... ..	3,000
Directors' fees ... ..	12,000
Debenture Int. Paid ... ..	12,000



6. (a) What do you mean by Depreciation? Give a critical estimate of the various systems of providing for Depreciation.

(b) XY Co., Ltd., of London, received a Trial Balance from their Brazilian Branch and incorporated the items thereof in the H.O.'s books at the rate of exchange ruling as on the date of their Balance Sheet. The Trial Balance contained the following types of items:—

- (i) Fixed Assets,
- (ii) Floating Assets and Liabilities,
- (iii) Profit and Loss Balance, and
- (iv) Remittances.

Do you approve of the procedure? If not, show the correct way of dealing with the items. Give reasons for your answer.

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### THIRD PAPER (Commercial Law)

*The questions are of equal value.*

#### FIRST HALF

*Examiner—DR. RADHABINOD PAL, M.A., D.L.*

*To answer ANY THREE questions.*

1. Can a person not a party to an agreement sue on that agreement? If so, under what circumstances?
2. Explain the validity or otherwise of agreements in restraint of trade.
3. A clause in a policy of fire insurance provides that 'if the claim is made and rejected, and an action or suit be not commenced within three months after such rejection all benefits under this policy shall be forfeited'. Discuss how far this clause is valid.
4. Examine how far supervening impossibility excuses performance of a promise.
5. Discuss the principle laid down in—  
Hadley v. Baxendale.

#### SECOND HALF

*Examiner—MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.*

*To answer ANY THREE questions.*

1. What is the legal position of an undisclosed principal?
2. Discuss the legal position of an infant as a member of a firm.
3. State the circumstances under which an Indian company may be wound up by the Court.
4. (a) A signs an instrument in the following terms:—'I promise to pay B or order or bearer Rs. 5,000.' Examine if it is a valid promissory note.

(b) An insolvent pays his creditors twelve annas in the rupee out of Court and gets receipts from them in full discharge of his debts. Can he apply for annulment of his adjudication?

5. What is submission to arbitration under the Indian Arbitration Act? Examine the legal effect of an award filed in the Court.

Or,

Write a short note on the responsibility of Railway Administrations as carriers in India.

#### FOURTH PAPER

#### (Banking)

*The questions are of equal value.*

*Answer ANY THREE questions from EACH half.*

##### FIRST HALF

*Examiner—DR. B. RAMCHANDRA RAU, M.A., PH.D.*

1. Write explanatory notes on *any four* of the following terms:—  
 (a) *Muddati hundi*, (b) free banking, (c) notary public, (d) open market operations, (e) case in need.
2. Why do banks fail generally? Comment on the *recent* American banking crisis or the Indian banking crisis of 1913-15. Compare and contrast the respective attitudes of the different governments.
3. Explain how far a trade cycle is due to monetary causes. What preventive or remedial measures can a banking system adopt in the matter? Why did America fail to cure the depression during 1930 by a policy of cheap money?
4. Discuss the nature of relationship that exists between a branch bank and the parent bank. Why has not India developed branch banking on an extensive scale?
5. Comment on the different types of customers' accounts kept with a commercial banker. What safeguards does the commercial banker observe while opening accounts with the same?

##### SECOND HALF

*Examiner—DR. BHANUBHUSHAN DASGUPTA, M.A., PH.D.*

1. Describe briefly the constitution and the functions of the Reserve Bank of India. Do you think it will be a perfect instrument for controlling the creation of credit in the country?
2. What are the special problems in connection with mortgage credit, and what prospects are there in India of building up efficient commercial or co-operative Mortgage Banks?
3. What observations have you to make about the scope, organization, and the present position of the Loan Offices in our country?

4. What important changes would you make in the law relating to joint stock banks with a view to speed up the development of banking on sound lines?
  5. Explain the legal position in relation to *one* of the following:—
    - (a) Incorrect entries in the Pass Book, from the banker's and the customer's standpoints.
    - (b) Life Policies as security for advances.
- 

### (Industrial Structure and Development)

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*The questions are of equal value.*

#### FIRST HALF

*Answer ANY THREE questions.*

1. What do you understand by Economic planning? In the present economic condition of Bengal, on what lines is Economic planning desirable?
2. Describe the various measures that have been adopted in India to solve the problem of housing industrial workers. Discuss the part that Government should play in solving this problem.
3. Discuss the methods that have been adopted by Germany for financing national industries. Can India in her present economic condition adopt some of those methods?
4. Examine the reasons that have led to the abandonment of the policy of *laissez faire* in British industries in recent years.
5. How would you account for the continuance of small scale industries in France? Describe the position of some of these industries from the standpoint of international trade.

#### SECOND HALF

1. Explain what is meant by 'Economic Nationalism', and give illustrations to show how this policy has affected the course of World Recovery.
2. Indicate the place of cottage industries in the economic life of India, and summarize the steps recently taken or contemplated to encourage them.
3. Write a note on the development of the Indian jute industry. What are the problems with which it is now confronted?
4. Sketch the progress of the Trade Union movement in India, bringing out its points of strength and weakness.
5. 'The President (of the All-India Organization of Industrial Employers) closed his address with a plea for the uniform treatment of

labour questions in British India and the Indian States.' (*Newspaper Report.*)

Annotate, explaining clearly the present position.

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### (Statistics)

*The questions are of equal value.*

Attempt ANY THREE from EACH half.

#### FIRST HALF

Examiner—DR. S. M. GANGULI, D.Sc.

1. Draw up *two* independent blank tables, giving rows, columns, and totals in each case, summarizing the details about the members of a number of families, distinguishing males from females, earners from dependents, and adults from children.

2. The following are 23 price relatives that are available for the construction of an index number of prices:—

48, 53, 61, 61, 64, 64, 70, 71, 73, 76, 78, 81, 85, 93, 94, 96, 96, 97, 101, 102, 139, 143, and 144.

Regarding these as a statistical group, calculate their mean, median, and a measure of dispersion.

Will you select the mean or the median as the appropriate average for the index number in question? Give reasons for your selection.

3. For what classes of data is the logarithmic scale useful for the purpose of graphical representation? Give reasons for your answer. Contrast the appearance of various rates of growth on the logarithmic and natural scales. What device would you adopt to distinguish one scale from the other on charts?

4. What are the principal sources of Indian price statistics, both official and non-official, wholesale and retail?

5. Explain *any five* of the following terms:—

Skewness, Seasonal Variation, Secular Trend, Probable Error, Regression Line, Normal Curve of Error, Mode, and Standard Deviation.

#### SECOND HALF

Examiner—DR. H. C. SINHA, M.Sc., Ph.D.

*The questions are of equal value.*

1. Explain any method by which the trend and deviations of a series extending over a considerable number of years can be studied separately the one from the other.

2. If you wanted details about Indo-British trade during recent years, what official publications would you consult? State the nature of the information available in each of such publications.

3. Describe the method of compilation and presentation of Indian agricultural statistics. Can you suggest any improvements?

4. Calculate roughly the coefficient of correlation between income and rent from the following table:—

Weekly Incomes						
Weekly rents	Rs. 15 to Rs. 20	Rs. 20 to Rs. 25	Rs. 25 to Rs. 30	Rs. 30 to Rs. 35	Rs. 35 to Rs. 40	Total
Rs. 2 to Rs. 4 ...	1	1	1	0	0	3
Rs. 4 to Rs. 6 ...	5	16	8	7	5	41
Rs. 6 to Rs. 8 ...	3	14	13	14	9	53
Rs. 8 to Rs. 10 ...	0	0	0	1	2	3
Total	9	31	22	22	16	100

		Averages.	Standard deviations.
		Rs.	Rs.
Incomes	...	27'75	6'0
Rents	...	6'12	1'21

5. The following are the marks obtained by 492 candidates in a certain examination:—

Not more than 40 marks, 212 candidates.

"	"	"	45	"	296	"
"	"	"	50	"	368	"
"	"	"	55	"	429	"
"	"	"	60	"	460	"
"	"	"	65	"	481	"
"	"	"	70	"	490	"
"	"	"	75	"	492	"

Find out the number of candidates who secured more than 42 but not more than 45 marks.

**(Economic Geography)***The questions are of equal value.**Answer ANY THREE questions from EACH half.***FIRST HALF***Examiner—MR. DWIJENDRAKUMAR SANYAL, M.A., B.COM.*

1. The present position of the tea industry is not as it was immediately after the introduction of the Restriction Scheme. State to what extent the following factors are responsible for its present position:—

(1) General trade depression, (2) increased production in non-restriction countries, and (3) competition from other beverages.

2. Discuss the distribution of the principal industries in India. To what extent has this been decided by the facilities of production and existence of markets? Illustrate your answer with reference to (1) Cement, (2) Salt, and (3) Sugar.

3. In what respects do you think can the present road development programme be improved? In those places where road construction is not possible how do you propose to develop internal communication?

4. Describe the chief sources of power in Bengal. Discuss your plan for establishing an electrical grid system in Bengal.

5. Describe the present state of the economic condition of the Red Sea coast and the regions behind it. To what extent do you think India's external trade will be affected by the development of that region?

**SECOND HALF***Examiner—DR. MANOMOHAN RAY, M.A., D.Sc., PH.D.*

1. What do you know about the present position of the International Steel Cartel? What do you think will be the effect on Indian industry of Great Britain's joining the cartel?

2. Even during the world-wide depression Japan has been able to expand her economic activities. How far have her resources of primary goods and power supply been responsible for such activities?

3. Describe the growth of British agriculture behind the protective system. State how far the programme is in accordance with the Ottawa Agreement.

4. State the effect of the transfer of Saar to Germany on the industrial development of France and Germany.

5. What in your view are the prospects of Latin America becoming a self-sufficient economic unit with the assistance of United States of America?

**(Agricultural Economics)**

*Examiner*—RAI BAHADUR B. B. MOOKERJEE, M.A.

*The questions are of equal value.*

**FIRST HALF**

*Answer ANY THREE questions.*

1. Describe in brief three main lines along which Government can help in the development of agriculture.
2. 'The truth is that Bengal at least is more highly taxed than any other civilized country in the world.' Discuss this conclusion of the late Major Jack.
3. Mention any two of the recommendations of the Linlithgow Agricultural Commission which you consider most important, and discuss the problem of their application to any province you know of.
4. Mention three main sources from which an agriculturist derives his capital in India. Discuss the advantages and disadvantages of each.
5. Take up any two important crops which you think most suitable for paddy land, and discuss their possibilities as substitutes for jute in Bengal.

**SECOND HALF**

*Answer ANY THREE questions.*

1. 'If the provision of cheap Capital to the cultivator is a matter of primary importance in agricultural development at the present time, the provision of efficient cattle is hardly of less importance.' Discuss.
  2. What were the different classes into which the late Mr. Jack classified for economic purposes the population in Faridpore, and what were his main conclusions about the proportion in comfort and in want? Give your own views on this conclusion.
  3. Discuss the main lines along which the question of water supply for agricultural work can be solved, with special reference to any province in India you know of.
  4. Discuss the possibilities and limitations of Co-operative Farming, Co-operative Sale, and Co-operative Credit Societies, with special reference to rural conditions of India.
  5. Write short notes on *any three* of the following:—
    - (a) Consolidation of holdings.
    - (b) Advantages of small farming as against large farming.
    - (c) Cottage industry as a subsidiary occupation for agriculturists.
    - (d) The conditions under which fruit culture may thrive in India.
    - (e) Conciliation of individual debt of agriculturists—the desirability and method.
-

**(Currency)**

*The questions are of equal value.*

**FIRST HALF**

*Examiner*—DR. B. RAMCHANDRA RAU, M.A., PH.D.

*Answer ANY THREE questions.*

1. What do you mean by managed currency? State the main objections against the immediate adoption of an international gold standard.
2. Comment on the merits and defects of the rupee being linked to sterling. What are the chances of the sterling becoming an international standard?
3. How do you propose to attain stability of prices? Is stability of prices desirable?
4. Point out the difficulties experienced in constructing an *Index Number* of prices. Is it possible to have a general purpose Index Number?
5. Explain the nature and use of forward exchange. Discuss the relation between the spot and forward rates.

**SECOND HALF**

*Examiner*—MR. A. C. SENGUPTA, M.A.

*Answer ANY THREE questions.*

1. Describe the system of currency India had just before the Great War. Why was it adopted, and how did it work?
  2. Explain and critically examine the quantity theory of money.
  3. What, in your opinion, are the necessary conditions that a good currency system should satisfy?  
How far does the currency system of India satisfy these conditions?
  4. Indicate the merits and defects of the different systems of regulating note issue.
  5. Explain the routine followed by a banker in negotiating a bill drawn under a Documentary Letter of Credit, mentioning the points to which special attention should be paid.
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**(Public Finance)**

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. P. N. BANERJEE, M.A., D.Sc.

*Answer ANY THREE questions.*

1. On what grounds would you justify the taxation of income from property at a higher rate than that applicable to income from work? Briefly discuss the nature of the General Property Tax in the U.S.A.
2. Examine the case for Death Duties. Would you advocate the imposition of Death Duties in India?
3. Give reasons in favour of or against the view that the land revenue in India is a tax and not rent.
4. State what is meant by the principle of Least Aggregate sacrifice in taxation. Consider its practical implications.
5. Give a brief account of the additional taxation which was levied by the Central Legislature in India during the years 1930-34. To what extent has this additional taxation been remitted in connection with the budget for the current year?

## SECOND HALF

*Examiner*—PROF. J. P. NEOGI, M.A., PH.D.

*Answer ANY THREE questions.*

1. How far do you agree with the view that the main justification of a progressive tax is to be found in the duty of the State to diminish inequality of incomes in modern communities? To what extent has the system of progressive taxation been adopted in India?
  2. What are the legislative and administrative devices that are usually adopted to secure economy in public expenditure? Illustrate your answer from Indian conditions.
  3. Briefly describe the main features of the provincial financial system in India before and after the introduction of the Reforms of 1919. Indicate the principal changes you would suggest in the system under the coming reforms.
  4. Examine the effect of public debts on (a) the size, and (b) the distribution, of the national dividend.  
Give a brief account of the existing public debt of India.
  5. Briefly describe the circumstances that led to the imposition of the Excess Profits Tax in India, and indicate the main features of the tax.
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**(Auditing)**

*The questions are of equal value.*

*Answer only THREE questions from EACH half.*

**FIRST HALF**

*Examiner—MR. G. BASU, B.A., A.S.A.A.*

1. State carefully the principles you would adopt, and your reasons for so doing, when allocating the following to Capital and/or Revenue:—

(1) Stock valued at Rs. 1,50,000 and Machinery appearing in the books at a value of Rs. 95,000 destroyed by fire, and for which Rs. 1,60,000 and Rs. 1,10,000 respectively were received from the Insurance Company.

(2) Structural alterations to Buildings.

(3) Compensation paid to a Managing Director, serving under an Agreement, for the termination of the Agreement before its expiration.

(4) Conversion of Gas Plant to Oil Fuel Plant for generation of electricity.

2. Discuss the question of Secret Reserves from the following points of view, bearing in mind your duty and liability as auditor as defined by Buckley, L. J. in *Newton v. Birmingham Small Arms Co., Ltd.*:—

(a) Effect on claim of loss by fire.

(b) Effect on dividends.

(c) Effect on value of shares.

3. At a general meeting of a company a shareholder rises and criticizes the company's annual accounts as follows:—

(a) He objects to the fact that Goodwill has appeared in the Balance Sheet for the last 10 years at the same figure and holds that it should be written down annually.

(b) He states that Plant and Machinery at Rs. 50,000 after deduction of Depreciation is wrong, because in his opinion it would not realize more than Rs. 40,000.

(c) He objects to premiums received on Shares during the time prior to the date of the Balance Sheet being taken to Profit and Loss Account, and to the Managing Agents getting Commission on the Premiums.

Give your views on these criticisms.

4. (a) State the legal position of an auditor as regards the 'stock-in-trade' appearing in the Balance Sheet of a company incorporated in India.

(b) How would you stand if, after signing a Balance Sheet, it came to light that—

(i) the quantities of stock had been overstated,

(ii) the prices at which the stock had been taken were inflated?

5. While conducting the audit of a Bank, what documents would you require to satisfy yourself as an auditor with regard to the following?—

- (a) Loan to A on mortgage of his property ;
- (b) Loan to an incorporated company on the charge of its uncalled capital and on the hypothecation of its floating assets ;
- (c) Loan to B on his Life Assurance Policy ; and
- (d) Advance to C on documentary bills.

## SECOND HALF

*Examiner*—MR. N. K. MAJUMDAR, M.A.

6. State briefly the law relating to the appointment of an auditor where (1) a company has omitted to elect an auditor at the last annual general meeting, (2) an auditor having been elected has resigned, and (3) an auditor other than the one retiring has been appointed.

7. What are 'Auditor's Certificates Rules, 1932'?

State briefly how you can qualify as an auditor so as to be competent to act as an auditor under the Indian Companies Act.

8. The Directors of a limited company decline to provide any amount for the depreciation of Plant and Machinery on the following grounds:—

(a) That the Plant is fully maintained by means of thorough day to day running repairs and suffers little, if any, depreciation, and

(b) That if similar Plant were to be purchased to-day, it would cost 4 times its original cost and that therefore nothing should be written off.

Do you as an auditor agree with the views of the Directors?

9. The Balance Sheet of A. B. Co., Ltd., on the 31st December, 1934, showed the position of that Company to be as under:—

<i>Liabilities.</i>			<i>Assets.</i>		
		Rs.			Rs.
Issued Share Capital			Freehold Property		2,40,000
7% Cumulative Preference Shares, fully paid	...	1,50,000	Stock	...	92,500
Ordinary Shares, fully paid	...	1,00,000	Sundry Debtors		1,25,000
Deferred Shares of Rs. 10 each, Rs. 5 paid	...	50,000	Cash	...	40,000
Sundry Creditors	...	67,500			
General Reserve	...	50,000			
Profit and Loss Account		80,000			
		<u>Rs. 4,97,500</u>			<u>Rs. 4,97,500</u>

Owing to a falling off in the demand for the Company's goods resulting from the invention of a cheaper substitute, the Directors, with the sanction of the Shareholders, entered into a contract for the sale

of the assets as they stood on the 31st December, 1934. The Company resolved to go into voluntary liquidation on 1st January, 1935. After completion of sale, payment of debts, and provision for expenses of liquidation, the sum of Rs. 3,40,000 was available for distribution. All dividends on Preference Shares had been paid to 31st December, 1933, this class of shares being preferential as to Capital, whilst the Ordinary and Deferred Shares rank *pari passu* in the event of winding-up.

Show the manner in which the Liquidator should distribute the assets.

10. You are asked by a client anxious to acquire an interest in a sound business to investigate for him the accounts of a firm whose results are as follows:—

<i>Dr.</i>		1932 Rs.	1933 Rs.	1934 Rs.
Stock, 1st January	...	60,750	45,680	54,520
Purchases, less Returns	...	59,750	56,800	80,780
Rent, Rates, and Taxes	...	3,800	3,570	4,200
Lighting and Heating	...	740	625	820
Sundry Trade Charges	..	8,500	2,700	9,275
Advertising	...	1,500	1,250	2,000
Bad Debts	...	1,136	618	305
Depreciation	...	1,981	1,462	2,892
<i>Cr.</i>				
Sales, less Returns	...	1,25,800	75,150	1,40,600
Stock, 31st December	...	45,680	54,520	50,750
Dividends and Interests on Investments	...	Nil	754	936

Set out in the form of a Report the results of your investigation.

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### (Business Organization)

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—MR. P. C. NANDI, B.A.(CAL.), B.Sc.(CANTAB).

*Question 1 is compulsory. Not more than TWO of the other four are to be attempted.*

1. Describe and illustrate the principles on which remuneration of Labour is based. What are the functions of Trade Unions?
2. Describe holding companies, and discuss their merits.
3. Discuss the place speculation holds in modern business.
4. What are the advantages of Life Insurance, and on what basis are the premiums calculated?
5. Describe the organization of the Calcutta Stock Exchange. What are the merits and demerits of the settlement system in delivery of securities?

## SECOND HALF

*Examiner*—MR. N. SARKAR, M.A.*Answer ANY THREE questions.*

1. Give a ruling for a Weekly Time Sheet.

Explain clearly why overtime work is usually discouraged in a modern workshop.

2. Distinguish between a Departmental Store and a Multiple Shop. State and explain, in each case, under which of these two categories would the following fall:—

(a) Bengal Stores in Chowringhee Place.

(b) Sweetmeat Shops of Dwarika Nath Ghosh & Sons in various parts of Calcutta.

(c) Whiteaway, Laidlaw & Co.'s shop in Chowringhee.

3. What is meant by 'Average' in Marine Insurance? Explain Particular Average and General Average, and give an example of each, illustrating the method of distribution.

4. How does the Reserve Bank of India propose to finance Indian agricultural operations and marketing of Indian crops?

How has a Scheduled Bank been defined in the Reserve Bank of India Act, 1934, Sections 2(e) and 42(1)?

5. Explain horizontal and vertical combination in business. What are Cartels and Trusts? Bring out clearly their points of similarity and contrast.

**(Transport)**

*The questions are of equal value.*

*Answer ANY THREE questions from EACH half.*

## FIRST HALF

*Examiner*—MR. H. D. GHOSH, M.A.

1. Comment on the principal sea routes of the British empire. Illustrate by sketch-maps.

2. 'Transport . . . is the predominant factor in Trade.' (*Stephenson.*) Explain.

3. What do you understand by the term 'Terminals'?

Comment on the principal terminal facilities that will be required in a modern goods shed and a goods yard.

4. Comment on the practical value of 'Ton-mile figures' in the making of 'reasonable railway rates'.

Outline the principal methods of compiling them.

5. Explain how the railroad industry is affected by the laws of increasing and diminishing returns. Illustrate by examples, and also comment on the peculiar features of railroad expenditure.

## SECOND HALF

*Examiner*—MR. J. C. BOSE

1. Name the metre gauge railway systems of India, excluding those situated in Southern India, and comment on some of the principal features of each. Illustrate the locations of the different metre gauge systems by a sketch map or maps.

2. Detail the principal aspects of port competition as it exists between the ports of Calcutta, Bombay, and Karachi in relation to the railways of the country. Illustrate the locations of these ports and the principal railways concerned by sketch maps.

3. To what extent are the Bengal-Nagpur and East Indian Railways interested in the Raneeunge coalfield areas? Describe the routes by which coal is transported from the Ranceeunge coalfields to Bombay and Madras. Illustrate your answers by maps.

4. Illustrate in sketch maps the location of the Ghaziabad, Ondal, Sitarampur, Naihati, and Parbatipur, marshalling yards in relation to the railways on which they are situated. Detail some of the more important items of traffic dealt with in each of these marshalling yards.

5. Explain what is meant by—

- (a) Owner's Risk Rates ;
- (b) The Branch Line Rebate System ;
- (c) Terminal Charges ;
- (d) The railways' reserve fund.

## (Economic History)

*The questions are of equal value.*

*Answer ANY THREE questions from EACH half.*

## FIRST HALF

*Examiner*—DR. N. SANYAL, M.A., PH.D.

*Answer ANY THREE of the following.*

1. Trace the trend of British Imperial Economic Policy from 1870 to 1934, particularly with reference to inter-imperial trade and tariff.

2. Compare the main features of the French and German Trade Union Movements.

3. Describe briefly the nature and direction of trade expansion of Japan during the 20th century, and point out the salient features thereof.
4. Examine, with reference to the course of economic events in Germany, how far the post-war economic life of Germany has been conditioned by the problem of reparations payment.
5. Trace briefly the history of Separation of Railway Finance from General Finances of the Government of India, and state the important features of the present arrangements.

#### SECOND HALF

*Examiner*—MR. M. K. GHOSH, M.A., B.COM.(LOND.).

1. Examine carefully the influence of the Poor Law Administration in England on the economic condition of that country.
2. Examine the social and economic effects of the Industrial Revolution in England.
3. Examine the provisions of the Bank Charter Act of 1844, and show how far the objects for which the Act was passed were fulfilled.
4. Examine carefully the post-war labour legislation in India.
5. Explain the measures adopted under President Roosevelt's 'New Deal' to raise the prices of agricultural products in U.S.A., and examine their applicability in the case of jute and rice in India.

# M. A. & M. Sc. Examinations,

1935

## PURE MATHEMATICS

### FIRST PAPER

Examiners—  $\left\{ \begin{array}{l} \text{MR. P. N. MITRA, M.A.} \\ \text{,, H. P. BANERJEE, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

N.B.—Six questions only to be attempted.

1. (a) If the biquadratic

$$ax^4 + 4bx^3 + 6cx^2 + 4dx + e = 0$$

has two equal roots, shew that its resolvent (Euler's) cubic has two equal roots whose common value is

$$\frac{8aJ - 2HI}{2I}.$$

Find also the third root of the cubic and the value of the equal roots of the biquadratic, and shew that the remaining two roots of the biquadratic will be real, equal or imaginary, according as  $2HI - 3aJ$  is negative, zero or positive.

(b) If  $a = 1$ , shew that the biquadratic and its resolvent cubic will have the same discriminant.

2. (a) For the equation

$$x^n + p_1x^{n-1} + p_2x^{n-2} + \dots + p_{n-1}x + p_n = 0,$$

shew that

$$S_r + p_1S_{r-1} + p_2S_{r-2} + \dots + p_{r-1}S_1 + rp_r = 0$$

and

$$II_r + p_1II_{r-1} + p_2II_{r-2} + \dots + p_{r-1}II_1 + p_r = 0,$$

where  $S_r$  and  $II_r$  denote respectively the sum of the  $r$ th powers of the roots and the sum of the homogeneous products of  $r$  dimensions, and  $r \leq n$ .

Shew also that the sum of the homogeneous products of  $r$  dimensions which can be formed of the roots of the equation

$$x^n + \pi_1x^{n-1} + \pi_2x^{n-2} + \dots + \pi_{n-1}x + \pi_n = 0$$

is equal to

$$p_r, \quad r \leq n.$$

- (b) Prove that the expression

$$(x-1)(x^2-1)(x^3-1)\dots(x^{n-1}-1) + (-1)^n n$$

vanishes for all values of  $x$  which are special roots of the equation  $x^n - 1 = 0$ .



3. (a) Distinguish between a Skew Determinant, a Symmetric Determinant, and a Skew-Symmetric Determinant, giving one example in each case.

Prove that the reciprocal of a skew-symmetric determinant of the  $n$ th order is a symmetric determinant if  $n$  be odd, and a skew-symmetric determinant if  $n$  be even.

(b) Evaluate:—

$$\begin{vmatrix} x, & 0, & 0, & 0, & \dots & 0, & a_n \\ -1, & x, & 0, & 0, & \dots & 0, & a_{n-1} \\ 0, & -1, & x, & 0, & \dots & 0, & a_{n-2} \\ 0, & 0, & -1, & x, & \dots & 0, & a_{n-3} \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots \\ 0, & 0, & 0, & 0, & \dots & x, & a_1 \\ 0, & 0, & 0, & 0, & \dots & -1, & a_0 \end{vmatrix}$$

4. (a) Express the Resultant of two equations of the  $m$ th and  $n$ th degrees as a symmetric function of the roots of the equations.

What happens if the roots are changed into their reciprocals? Give reasons for your answer.

(b) Find by Sturm's theorem the nature and position of the roots of the equation

$$x^6 - 6x^5 - 90x^3 + 12x - 9 = 0.$$

5. (a) If  $\alpha, \beta$ , and  $\gamma$  be the arcs joining the middle points of the sides of a spherical triangle  $ABC$ , shew that

$$\frac{\cos \alpha}{\cos \frac{1}{2}\alpha} = \frac{\cos \beta}{\cos \frac{1}{2}\beta} = \frac{\cos \gamma}{\cos \frac{1}{2}\gamma} = \frac{1 + \cos \alpha + \cos \beta + \cos \gamma}{4 \cos \frac{1}{2}\alpha \cos \frac{1}{2}\beta \cos \frac{1}{2}\gamma}.$$

Shew also that if one of these arcs be a quadrant, the other two are also quadrants.

(b) In an isosceles spherical triangle  $ABC$ , each of the base angles is double the vertical angle; shew that

$$\cos a \cos \frac{1}{2}a = \cos (c + \frac{1}{2}a),$$

where  $a$  is one of the equal sides of the triangle.

6. (a) If  $x$  be positive and  $\neq 1$ , shew that

$$px^{p-1}(x-1) > x^p - 1 > p(x-1),$$

where  $p$  is a negative rational number.

(b) Shew that

$$n \left\{ \left( n+1 \right)^{\frac{1}{n}} - 1 \right\} < 1 + \frac{1}{2} + \dots + \frac{1}{n} < n \left\{ 1 - \frac{1}{(n+1)^{\frac{1}{n}}} + \frac{1}{n+1} \right\}$$

(c) If

$$s = a_1 + a_2 + a_3 + \dots + a_n,$$

shew that

$$\prod_{r=1}^n \left\{ \frac{1}{Q_r} - 1 \right\} a_r \geq (n-1)^2.$$

7. (a) Shew that

$$\lim_{x \rightarrow \infty} \left( 1 + \frac{1}{x} \right)^x,$$

$x$  positive or negative is a finite number.

(b) Find the values of

$$(i) \lim_{x \rightarrow \infty} \left\{ \frac{a_0 + a_1 x + a_2 x^2 + \dots + a_n x^n}{b_0 + b_1 x + b_2 x^2 + \dots + b_r x^r} \right\}^{\lambda_0 + \lambda_1 x + \dots + \lambda_r x^r},$$

$$(ii) \lim_{x \rightarrow \infty} \sin \left\{ x \cot \frac{a}{x} \log \left( 1 + \tan \frac{a}{x} \right) \right\}.$$

8. Test for convergence the following:—

$$(i) 1 + \frac{a}{\gamma} \cdot \frac{\beta}{\delta} + \frac{a(a+1)}{\gamma(\gamma+1)} \cdot \frac{\beta(\beta+1)}{\delta(\delta+1)} + \dots$$

$$(ii) \frac{2}{1} + \frac{2^2}{1+1} + \frac{2^3}{1+1} + \frac{2^4}{1+1} + \dots$$

$$(iii) \sum_{n=1}^{\infty} \left\{ 1 - \left( 1 - \frac{1}{n} \right)^{-n} z^{-n} \right\}, |z| > 1.$$

9. (a) Shew that a uniformly convergent series within a given region represents a continuous function of the variable within that region.

(b) Illustrate by an example that continuity of the sum function is not a sufficient condition for uniform convergence.

(c) Test for uniform convergence the series

$$\frac{x}{1+x^2} + \left( \frac{2x}{1+4x^2} - \frac{x}{1+x^2} \right) + \dots + \left\{ \frac{nx}{1+n^2 x^2} - \frac{(n-1)x}{1+(n-1)^2 x^2} \right\} + \dots$$

for  $0 \leq x \leq 1$ .

10. (a) State Riemann's theorem on commutation of terms of a semi-convergent series.

Rearrange the terms of the semi-convergent series

$$1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6} + \dots$$

in such a way that the sum of the series may be zero.

(b) Prove that

$$\sum_{n=0}^{\infty} \frac{1}{(8n+1)(8n+2)(8n+3)(8n+4)} = \frac{1}{4} \log 2 - \frac{\pi}{24}.$$

11. (a) Shew that there cannot be more than one partial quotient in the acyclic part of the continued fraction which represents

$$\frac{\sqrt{N}}{M};$$

and that the last partial quotient of its cyclical part is double the unique partial quotient which forms the acyclic part.

(b) Shew that

$$1 + \frac{a}{b} + \frac{a(a+1)}{b(b+1)} + \frac{a(a+1)(a+2)}{b(b+1)(b+2)} + \dots$$

$$= 1 + \frac{a}{b} - \frac{(a+1)b}{a+b+2} - \frac{(a+2)(b+1)}{a+b+4} - \dots$$


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## SECOND PAPER

MR. P. L. GANGULI, M.A., B.L.

„ S. C. GHOSH, M.A.

*The questions are of equal value.*

*Not more than SIX questions to be attempted.*

1. (a) Prove that the centre of gravity of the area of a quadrilateral is the same as that of four equal particles placed one at each angular point of the quadrilateral, together with a fifth particle of equal but negative mass, placed at the intersection of the diagonals. Find analytical expressions for the co-ordinates of the centre of gravity.

(b) If  $G$  be the centre of gravity of any arc  $AP$  of the lemniscate  $r^2 = a^2 \cos 2\theta$ , prove that  $OG$  bisects the angle  $AOP$ , where  $O$  is the pole of the lemniscate.

2. (a) A heavy uniform string is suspended from two given points, and is in equilibrium in a vertical plane. Find the equation to the curve in which it hangs.

(b) A uniform chain hangs round a smooth vertical circle. Prove that if the pressure vanishes at the lowest point, then the tension at the highest point is three times that at the lowest point.

3. (a) A heavy string rests on a rough curve of any form in one plane. Find the equations of equilibrium.

(b) A heavy string, resting on a rough vertical circle with one extremity at the highest point, is on the point of motion. If the length of the string is equal to a quadrant, prove that

$$\frac{1}{2}\pi \tan \epsilon = \log \tan 2\epsilon,$$

where  $\tan \epsilon$  is the coefficient of friction.

4. (a) Find the attraction of a uniform spherical shell at any point.

(b) Hence deduce the attraction of a solid homogeneous sphere at any internal point.

5. Prove Poisson's Equation in polar co-ordinates

$$\frac{1}{r^2} \left\{ \frac{d}{dr} \left( r^2 \frac{dV}{dr} \right) + \frac{1}{\sin \theta} \frac{d}{d\theta} \left( \sin \theta \frac{dV}{d\theta} \right) + \frac{1}{\sin^2 \theta} \frac{d^2 V}{d\phi^2} \right\} = -4\pi\gamma\rho.$$

6. (a) Obtain the accelerations of a moving point referred to rectangular axes  $Ox$  and  $Oy$ , which are not fixed in space, but which revolve in any manner about the origin  $O$  in their own plane.

(b) A point  $P$  describes an equiangular spiral with constant angular velocity about the pole  $O$ ; shew that its acceleration varies as  $OP$  and is in a direction making with the tangent at  $P$  the same constant angle that  $OP$  makes.

7. (a) A particle moves in a plane with an acceleration  $P$  which is always directed to a fixed point in the plane. Prove the relation

$$P = \frac{h^2}{p^3} \frac{dp}{dr}.$$

(b) A particle moves in an ellipse so that the resolved part of the velocity perpendicular to the focal distance is constant; prove that the force tends to the centre of the ellipse.

8. A particle moves with a central acceleration which varies inversely as the cube of the distance; if it be projected from an apse at a distance  $a$  from the origin with a velocity which is  $\sqrt{2}$  times the velocity for a circle of radius  $a$ , shew that the equation to its path is

$$r \cos \frac{\theta}{\sqrt{2}} = a.$$

9. (a) If a curve be described under the action of force  $P$  tending to the pole and a normal force  $N$ , prove that

$$p^3 \frac{d}{dr} \left( N r \frac{dr}{dp} \right) + \frac{d}{dr} \left( P p^3 \frac{dr}{dp} \right) = 0.$$

(b) A particle moves in a smooth tube in the form of a catenary, being attracted to the directrix by a force proportional to the distance from it. Shew that the motion is simple harmonic.

10. A particle, initially at rest at a point of the logarithmic spiral  $n\theta$ , moves on the curve under the action of an attracting centre of force varying as the distance, situated at the pole; determine the motion and find the normal reaction.

### THIRD PAPER

Examiners—  $\left\{ \begin{array}{l} \text{DR. R. N. SEN, M.A., PH.D.} \\ \text{,, H. M. GHOSH, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Six questions are to be attempted, THREE from EACH half.*

#### FIRST HALF

1. Find the distance between two points of which the trilinear or areal co-ordinates are given. Hence, or otherwise, deduce the equation of the circle described on the side  $BC$  of the triangle of reference as diameter.

Find the equation of the circle passing through the incentre and the vertices  $B$  and  $C$  of the triangle of reference.

2. Shew that, by properly choosing the triangle of reference, the homogeneous co-ordinates of any four points, no three of which are collinear, can be written as  $(\pm f, \pm g, \pm h)$ .

Hence, or otherwise, deduce the harmonic property of the complete quadrilateral.

Find the locus of centres of conics passing through the points  $(\pm f, \pm g, \pm h)$  and specify several fixed points through which the centre-locus passes. Shew also that the nine-point circle is a particular case of this locus.

3. Find the tangential equation of a conic given by the general equation of the second degree.

Prove that the four common tangents to the conics

$$\frac{x^2}{\lambda} + \frac{y^2}{\mu} + \frac{z^2}{\nu} = 0 \quad \text{and} \quad \frac{x^2}{\lambda'} + \frac{y^2}{\mu'} + \frac{z^2}{\nu'} = 0$$

$$x\sqrt{\mu\nu'} - \mu'\nu \pm y\sqrt{\nu\lambda'} - \nu'\lambda \pm z\sqrt{\lambda\mu'} - \lambda'\mu = 0.$$

Shew how to find the foci of a curve when its tangential equation is given, and illustrate the method for the curve

$$n^4 + l^2 m^2 = 0.$$

4. Find the polar reciprocal of one circle with regard to another, and shew that the origin of reciprocation is a focus of the reciprocal.

Shew that the polar reciprocal of

$$a\alpha^2 + b\beta^2 + c\gamma^2 + 2f\beta\gamma + 2g\gamma\alpha + 2h\alpha\beta = 0$$

with respect to the conic  $\phi(\alpha, \beta, \gamma) = 0$  is

$$\begin{array}{ccc} a & h & g \\ h & b & f \\ g & f & c \end{array} \begin{array}{c} \frac{\partial \phi}{\partial \alpha} \\ \frac{\partial \phi}{\partial \beta} \\ \frac{\partial \phi}{\partial \gamma} \end{array} = 0.$$

$$\begin{array}{ccc} \frac{\partial \phi}{\partial \alpha} & \frac{\partial \phi}{\partial \beta} & \frac{\partial \phi}{\partial \gamma} \\ \frac{\partial \phi}{\partial \alpha} & \frac{\partial \phi}{\partial \beta} & \frac{\partial \phi}{\partial \gamma} \end{array} \begin{array}{c} \frac{\partial \phi}{\partial \alpha} \\ \frac{\partial \phi}{\partial \beta} \\ \frac{\partial \phi}{\partial \gamma} \end{array} = 0$$

Shew that if  $abc = fgh$ , any one of the three conics

$$a\alpha^2 + 2fyz = 0, \quad by^2 + 2gzx = 0, \quad cz^2 + 2hxy = 0$$

is the polar reciprocal of a second with regard to the third.

5. Shew that, by properly choosing the vertex and the plane of projection, any straight line can be projected to infinity and any two angles into angles of given magnitude, all the elements to be projected being coplanar.

Prove that the locus of the foci of parabolas inscribed in a triangle is the circumcircle.

Generalize the above theorem by projection.

## SECOND HALF

6. Define unicursal curve, and prove that when the co-ordinates of any point on a curve can be expressed rationally in terms of a single parameter, the curve has its maximum number of double points.

Illustrate this proposition by examining the curve

$$x = \frac{3at^2}{1+t^3}, \quad y = \frac{3at}{1+t^3}.$$

7. Define a point of inflexion and distinguish it from a double or triple point. If two points of inflexion coincide, will they give rise to a sextactic point? Give reasons for your answer.

If a conic osculates a cubic at two distinct points, shew that the chord of contact intersects the curve again in a point of inflexion.

Prove that the curve  $axy + a^3 = x^3$  has a point of inflexion at the point where it cuts the axis of  $x$  and that the tangent at the point of inflexion is inclined to the axis of  $x$  at an angle  $\tan^{-1}3$ .

8. If  $n, m, \delta, k, i$  denote the degree, class, number of nodes, cusps, and inflexional tangents respectively of a curve, prove that

$$m = n(n-1) - 2\delta - 3k$$

$$i = 3n(n-2) - 6\delta - 8k.$$

Express the deficiency of a curve in terms of  $n, \delta$  and  $k$ , and shew that the deficiency is unaltered by quadric transformation.

9. Prove that, by proper choice of the triangle of reference, the general equation of a cubic can be thrown into the form  $x^3 + y^3 + z^3 + kxyz = 0$ , and discuss the relation of the curve to the new triangle of reference.

Prove that the first positive pedal of the parabola  $y^2 + 4px = 0$  is the Cissoid  $x(x^2 + y^2) = py^2$ , and hence shew that every cuspidal cubic can be projected into a Cissoid.

10. Shew that the general equation of all quartics having nodes at the circular points can be written as  $C = S$ , where  $C$  is a circle and  $S$  a conic.

Prove that the locus of a point which moves such that the product of its distances from two fixed points is constant is a bicircular quartic.

## FOURTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{DR. S. M. GANGULI, D.Sc.} \\ \text{MR. B. M. SEN, M.A., M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Attempt THREE questions from EACH half.*

## FIRST HALF.

1. Shew that the line represented by the equations

$$\frac{a+mx-ny}{m-n} = \frac{b+nx-lz}{n-l} = \frac{c+ly-mx}{l-m}$$

is at an infinite distance in the plane

$$x(m-n) + y(n-l) + z(l-m) = 0,$$

unless  $la + mb + nc = 0$ , when it is indeterminate.

From any point  $P$  are drawn  $PM$  and  $PN$  perpendicular to the planes  $zx$  and  $xy$ .  $O$  is the origin and  $\alpha, \beta, \gamma, \theta$  are the angles which  $OP$  makes with the co-ordinate planes and with the plane  $OMN$ . Prove that

$$\operatorname{cosec}^2 \theta = \operatorname{cosec}^2 \alpha + \operatorname{cosec}^2 \beta + \operatorname{cosec}^2 \gamma.$$

2. If the tetrahedron whose vertices are

$$A_i \equiv [x_i, y_i, z_i] (i=1, 2, 3, 4)$$

is such that the perpendiculars from the vertices on the opposite faces are concurrent, prove that

$$\Sigma x_2 x_3 + \Sigma x_1 x_4 = \Sigma x_3 x_1 + \Sigma x_2 x_4 = \Sigma x_1 x_2 + \Sigma x_3 x_4,$$

and deduce that the three sums of the squares of opposite edges are equal.

Prove also that if two pairs of opposite edges of a tetrahedron are at right angles, the third pair are also at right angles.

3. Show that the locus of the pole of a tangent plane to any quadric with regard to any confocal is the normal to the first surface.

Hence, or directly prove that if through a given line tangent planes be drawn to a system of confocals, the corresponding normals generate a hyperbolic paraboloid.

4. Prove that the *focal* and *dirigent* conics are reciprocals of each other with respect to the principal section in the plane of which they lie, and the line joining the foot of any directrix with the corresponding focus is a normal to the focal conic.

5. A cubic curve, which is the intersection of two conicoids having a common generating line, intersects all the generating lines of the same system as the common generating line in two points and those of the opposite system in one point only.

Prove that an infinite number of curves of the third degree can be drawn through five points arbitrarily chosen in space, but that six determine the curve.

What limitations are necessary that such a curve shall pass through the points?

6. A surface is generated by a straight line always passing through the two fixed lines

$$y = mx, z = c \quad \text{and} \quad y = -mx, z = -c;$$

prove that the equation of the surface generated is of the form

$$\frac{mzx - yz}{c^2 - z^2} = \phi \left( \frac{mzx - cy}{c^2 - z^2} \right)$$

also that its differential equation is

$$(cy - mzx) \frac{\partial F}{\partial x} + m(mzx - yz) \frac{\partial F}{\partial y} + m^2(c^2 - z^2) \frac{\partial F}{\partial z} = 0.$$

## SECOND HALF.

7. Define the term radius of spherical curvature  $R$  as applied to a twisted curve, and find an expression for it in terms of the radii of curvature and torsion ( $\rho$  and  $\sigma$ ).

Prove that the radius of circular curvature of the locus of the centre of spherical curvature of a twisted curve is

$$R \frac{dR}{d\rho}.$$

8. Define a *developable surface*, and prove that the envelope of a one-parameter family of planes is a developable surface.

Determine the developable surface passing through the two parabolas

$$y^2 = 4ax, z = 0; \quad x^2 = 4ay, z = b$$

and show that its edge of regression lies on the surface

$$y^2 z = x^2 (b - z).$$

9. Define a minimal surface, and prove that the asymptotic lines are everywhere perpendicular. Verify that the surface

$$x = n \cos v, y = n \sin v, z = bv + \int \left( \frac{u^2 + b^2}{u^2 - b^2} \right)^{\frac{1}{2}} \frac{du}{u}$$

is a minimal surface.

10. Indicate in brief outlines how the fundamental equations of Gauss and Mainardi and Codazzi are derived, and explain their full significance.

11. Define the term geodesic curvature of a curve on a surface, and explain its relation with the normal curvature. Deduce the equation of a geodesic in any standard form.

Prove that straight lines are the only asymptotic lines which are geodesics.

## FIFTH PAPER

$$\text{Examiners—} \begin{cases} \text{DR. S. D. MUKHERJEE, M.A., PH.D.} \\ \text{MR. M. GUPTA, M.Sc.} \end{cases}$$

*The questions are of equal value.*

*Answer FIVE questions only.*

1. If  $U_n$  and  $L_n$  denote the *upper* and *lower* bounds respectively of the elements  $a_1, a_2, \dots, a_n$ , ( $n = 1, 2, 3, \dots$ ), shew that the sequences  $\{U_n\}$  and  $\{L_n\}$  are both *monotone* and if they have a common finite limit, the sequence  $\{a_n\}$  will converge.

$$\text{If } \lim_{n \rightarrow \infty} x_n = x, \text{ then will also } \lim_{n \rightarrow \infty} \frac{x_1 + x_2 + \dots + x_n}{n} = x.$$



2. Prove that a function continuous in  $(a, b)$  is *bounded* in it and deduce that it is *uniformly* continuous in the same interval.

A function  $f(x)$  is defined in  $(0, 1)$  as follows:—

$$f(x) = \frac{1}{q}, \text{ when } x = \frac{p}{q} \\ = 0, \text{ elsewhere,}$$

$p$  and  $q$  being any two positive integers prime to each other and  $p < q \neq 0$ .

Prove that  $f(x)$  is or is not continuous according as  $x$  is or is not irrational.

3. Explain what you mean by the *right* and *left derivatives* of a function  $f(x)$  at the point  $x=a$ . When is  $f(x)$  said to possess a *differential coefficient* at the same point?

Determine the right and left derivatives of the function

$$\frac{x}{1+e^x}.$$

Show that the function  $f(x)$  possesses a differential coefficient at  $x=0$  and that  $f'(x)$  oscillates infinitely often in the neighbourhood of the origin, it being given that

$$f(x) = e^{-\frac{1}{x^2}} \sin \frac{1}{x}, \quad f(0) = 0.$$

4. Obtain the necessary and sufficient conditions for the existence of a *maximum* or *minimum* of a function  $u$  of three independent variables  $x, y, z$ .

A given volume  $V$  of a metal is to be shaped into a rectangular box without a lid and of uniform thickness  $a$ . Determine the dimensions of the box so that it may have the *maximum* capacity.

5. Prove the following:—

(a) If  $u = xyz \cdot F\{f_1(x^2 + y^2 + z^2), f_2(yz + zx + xy)\}$ , then will

$$(y-z) \frac{du}{dx} + (z-x) \frac{du}{dy} + (x-y) \frac{du}{dz} = u \cdot \left( \frac{y-z}{x} + \frac{z-x}{y} + \frac{x-y}{z} \right).$$

(b) If  $u$  denotes any function of  $x, y, z$  and  $U$  the same function of  $YZ/X, ZX/XY$ , then will

$$x^2 \frac{d^2 u}{dx^2} + y^2 \frac{d^2 u}{dy^2} + z^2 \frac{d^2 u}{dz^2} + yz \frac{d^2 u}{dy dz} + zx \frac{d^2 u}{dz dx} + xy \frac{d^2 u}{dx dy} \\ = \frac{1}{2} \left( X^2 \frac{d^2 U}{dX^2} + Y^2 \frac{d^2 U}{dY^2} + Z^2 \frac{d^2 U}{dZ^2} \right).$$

6. If the points of discontinuity of a function  $f(x)$  bounded in  $(a, b)$  can be enclosed in a *finite* set of sub-intervals the sum of whose lengths is less than an arbitrary pre-assigned positive number, show that the function  $f(x)$  is *R-integrable* in  $(a, b)$ . Point out the necessity, if any, in your proof of the condition that the set of intervals should be *finite*.

Given that the functions  $f_n(x)$ ,  $n=1, 2, 3, \dots$  are all continuous in  $(a, b)$  and  $\lim_{n \rightarrow \infty} f_n(x) = f(x)$ ,  $a \leq x \leq b$ . Examine whether or no  $f(x)$  is *R-integrable* in  $(a, b)$ .

7. If the functions  $f(x)$  and  $\phi(x)$  are bounded and integrable and of them the former is continuous and the latter has the same sign in  $(a, b)$ , shew that

$$\int_a^b f(x)\phi(x)dx = f(a + \theta(b-a)) \int_a^b \phi(x)dx, 0 \leq \theta \leq 1.$$

The functions  $f(x)$  and  $\phi(x)$  are bounded in  $(0, 1)$  except at the points  $a$  and  $\beta$  respectively and  $a \neq \beta$ . Prove that

$$\int_0^1 f(x)\phi(x)dx$$

converges if both

$$\int_0^1 |f(x)| dx \text{ and } \int_0^1 |\phi(x)| dx$$

do the same. How do you modify the result when  $a = \beta$ ?

8. Prove under certain conditions (to be specified) that

$$\frac{d}{d\gamma} \int_a^\infty f(x, y) dx = \int_a^\infty \frac{d}{d\gamma} f(x, y) dx,$$

and indicate the steps in your proof where you require them.

Examine for converge the integral

$$\int_0^\infty \frac{x^\mu}{1+x^2} dx,$$

and shew that it is then permissible to differentiate it under the integral sign.

9. A  $(1, 1)$ -correspondence between points of the  $xy$ - and  $uv$ -planes is defined by

$$x = f(u, v), \quad y = \phi(u, v),$$

where the functions  $f$  and  $\phi$  together with their first partial differential coefficients with respect to  $u$  and  $v$  are continuous inside and on the boundary of a closed region  $A_1$  of the  $uv$ -plane. If  $A$  denotes the corresponding closed region in the  $xy$ -plane and  $\Omega$  and  $\Omega'$  the areas respectively of  $A$  and  $A_1$ , prove that

$$\Omega = \Omega_1 \left| \frac{d(f, \phi)}{d(\xi, \eta)} \right|,$$

where  $(\xi, \eta)$  is a point inside or on the boundary of the region  $A_1$  and the Jacobian  $\frac{d(f, \phi)}{d(u, v)}$  does not change sign in it.

Insert proper limits in the double integral  $\iint dx dy$  in order that it may represent the area of the closed conic.

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0.$$

10. Work out any two of the following :—

$$(a) \text{ Prove that } \int_0^{\frac{\pi}{2}} \tan \theta \log \cot \theta d\theta = \frac{\pi^2}{48}.$$

(b) Prove that  $\iint_A \sqrt{\left(\frac{1-x^2-y^2}{1+x^2+y^2}\right)} dx dy = \frac{\pi}{4} \left(\frac{\pi}{2} - 1\right)$ ,

where the field of integration  $A$  is the first quadrant of the circle  $x^2 + y^2 = 1$ .

(c) Prove that  $\int_0^\infty dz \int_0^\infty dy \int_0^\infty V dx = \int_0^1 dw \int_0^1 dv \int_0^\infty V' u^2 v du$ ,

where  $x+y+z=u$ ,  $x+y=uv$ ,  $y=uvw$  and  $V'$  is what  $V$  becomes when in the latter  $x, y, z$  are replaced by their values in terms of  $u, v, w$ .

11. State fully (without proof) the limits to which Fourier series converges for a function  $f(x)$  which satisfies Dirichlet's conditions in the closed interval  $(-\pi, \pi)$ . Deduce from it Fourier cosine series in the closed interval  $(, 1)$ .

Obtain Fourier cosine series for the function  $f(x)$ , where

$$f(x) = \frac{\pi^2}{4} - x^2, \text{ when } 0 \leq x \leq \frac{\pi}{2} \\ = 0, \dots \dots \dots \frac{\pi}{2} \leq x \leq \frac{\pi}{2}.$$

Examine whether or no this series possesses a point of discontinuity.

## SIXTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{DR. H. D. BAGCHI, M.A., PH.D.} \\ \text{MR. B. N. PAL, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

### FIRST HALF.

1. (a) How would you solve an equation of the type :

$$y = xf(p) + \phi(p),$$

( where  $p \equiv \frac{dy}{dx}$  ) ? Solve, in particular, the equations—

(i)  $y = px + \frac{a}{p},$

ii)  $y = p^n.$

(b) Define an *exact differential equation*, and indicate, in *general terms*, a method of integrating such an equation.

Verify that the equation

$$(x^2 + 2) \frac{d^2 y}{dx^2} + 4x \frac{dy}{dx} + 2y = \frac{1 - \log x}{x^2}$$

is *exact*, and work out the complete primitive.

2. (a) Solve completely the differential equation

$$\frac{d^n y}{dx^n} = e^x,$$

and prove that if  $y$  is restricted to vanish when  $x = -\infty$ , it must be equal to  $e^x$ .

(b) By means of the substitution

$$z = \left( \frac{d^2 y}{dx^2} \right)^{-\frac{2}{3}},$$

transform the differential equation :

$$3 \frac{d^2 y}{dx^2} \frac{d^4 y}{dx^4} - 5 \left( \frac{d^2 y}{dx^2} \right)^2 = 0$$

into one having  $z$  for the dependent variable (the independent variable being unaffected). Hence or otherwise obtain the complete solution.

3. (a) For a linear differential equation of the form--

$$\frac{d^n y}{dx^n} + a_1 \frac{d^{n-1} y}{dx^{n-1}} + a_2 \frac{d^{n-2} y}{dx^{n-2}} + \dots + a_n y = 0,$$

(where  $a_1, a_2, a_3, \dots, a_n$  are constants or functions of  $x$ ), prove that the general solution is expressible as a *linear* combination of  $n$  independent particular solutions. How would you construct the general solution when  $a_1, a_2, \dots, a_n$  are all *constants*?

(b) Show that the differential equation

$$\begin{vmatrix} \frac{d^3 y}{dx^3} & \frac{d^2 y}{dx^2} & \frac{dy}{dx} & y \\ -\cos x, & -\sin x, & \cos x, & \sin x \\ \sin x, & -\cos x, & -\sin x, & \cos x \\ 5^3, & 5^2, & 5, & 1 \end{vmatrix} = 0$$

admits of the particular solutions

$$y = \cos \left( x + \frac{\pi}{4} \right)$$

and

$$y = \sin \left( x + \frac{\pi}{4} \right).$$

Determine a third independent integral and hence or otherwise ascertain the complete primitive.

4. (a) Explain how the solution of the partial differential equation

$$Pp + Qq = R,$$

(wherein  $P, Q, R$  are continuous functions of  $x, y, z$  and  $p \equiv \frac{dz}{dx}, q \equiv \frac{dz}{dy}$ ),

depends on that of

$$\frac{dx}{P} = \frac{dy}{Q} = \frac{dz}{R}.$$

(b) Integrate the equation

$$(x-1)p + (y-2)q = z-3,$$

and make sure that the general solution represents all possible cones, that can have the point (1, 2, 3) for their common vertex.

5. (a) Integrate each of the partial differential equations—

$$(i) \quad \frac{d^2 z}{dx dy} = 0; \quad (ii) \quad \frac{d^2 z}{dx^2} + \frac{d^2 z}{dy^2} = 0.$$

(b) By means of the substitution

$$Z = \log z,$$

convert the differential equation

$$z \frac{d^2 z}{dx dy} - \frac{dz}{dx} \frac{dz}{dy} = 0$$

into one having  $Z$  for the dependent variable, the independent variables being the same as before. Deduce or find directly the final solution.

## SECOND HALF.

6. If

$$I_{m, n} \equiv \int_0^1 z^m P_n(z) dz,$$

(where  $m, n$  denote two positive integers), prove the reduction formula :

$$I_{m+2, n} = \frac{(m+1)(m+2)}{(m-n+2)(m+n+3)} \cdot I_{m, n};$$

and substantiate the following results :—

(a)  $I_{m, n} = 0$ , if  $m < n$ ;

$$(b) \quad I_{n, n} = \frac{2^{n+1} (n!)^2}{(2n+1)!}.$$

7. Assuming that the infinite series on the left-hand side of the equality :

$$\sum_{n=0}^{\infty} h^n P_n(z) = \frac{1}{\sqrt{1-2zh+h^2}},$$

is uniformly convergent for all real values of  $z, h$ , lying in the interval  $(-1, 1)$ , work out the relation :

$$\sum_{n=0}^{\infty} \frac{P_n(z)}{n+k} = \int_0^1 \frac{h^{k-1}}{\sqrt{1-2zh+h^2}} \cdot dh,$$

(where  $k$  is any given positive integer).

Set  $k=1$ , and deduce the result :

$$\sum_{n=0}^{\infty} \frac{P_n(\cos \theta)}{n+1} = \log \left( 1 + \operatorname{cosec} \frac{\theta}{2} \right).$$

8. (a) Use the formula

$$Q_n(z) = \frac{1}{2} \int_{-1}^1 \frac{P_n(y)}{z-y} dy$$

to prove the recurrence formulæ :

$$(i) \quad Q'_{n+1}(z) - Q'_{n-1}(z) = (2n+1)Q_n(z),$$

$$(ii) \quad Q'_{n+1}(z) - zQ'_n(z) = (n+1)Q_n(z).$$

(b) Verify that the functional equation

$$(n+1)\phi_{n+1}(z) - (2n+1)z\phi'_n(z) + n\phi_{n-1}(z) = 0$$

possesses the particular solution  $\phi_n(z) = Q_n(z)$ .

Can you derive the *general* solution? Indicate the leading steps without entering into details.

9. (a) Establish the following property of Legendre's associated functions of the first kind :—

$$\int_{-1}^1 P_n^m(z) P_r^m(z) dz = 0,$$

(where  $n, r$  are *unequal* positive integers, and  $m$  is a positive integer less than both of them).

(b) Justify the following observations :—

(i) that, if  $m \neq 0$ , all the zeros of  $P_n^m(z)$  are real and lie in the *closed* interval  $(-1, 1)$  ;

and (ii) that, if  $m=0$ , all the zeros of the function are real and lie in the *open* interval  $(-1, 1)$ .

10. (a) Establish the equality—

$$\nabla^2(r^m V_n) = m(m+2n+1)r^{m-2}V_n,$$

where  $V_n$  is a solid harmonic of degree  $n$  and  $r^2 = x^2 + y^2 + z^2$ . Deduce or prove directly that

$$\frac{1}{r} \text{ and } \frac{V_n}{r^{2n+1}}$$

are both solid harmonics.

(b) Expand

$$(x^2 + y^2 + z^2) [(x+y+z)^2 + xy] - 7xyz^2$$

in the form :

$$V_4 + r^2 V_2 + r^4 V_0,$$

where  $V_r$  is a rational solid harmonic of degree  $r$ .

Hence or otherwise express

$$1 + \sin 2\theta (\sin \phi + \cos \phi) + \frac{1}{2} \sin^2 \theta \sin 2\phi (3 - 7 \cos^2 \theta)$$

in the form

$$Y_4(\theta, \phi) + Y_2(\theta, \phi) + Y_0(\theta, \phi),$$

where  $Y_r(\theta, \phi)$  is a surface harmonic of degree  $r$ .

## SEVENTH PAPER

## (Theory of Functions of a Real Variable—First Paper)

Examiners—  $\begin{cases} \text{DR. S. D. MUKHERJI, M.A., PH.D.} \\ \text{MR. M. GUPTA, M.Sc.} \end{cases}$

The questions are of equal value.

Answer six questions only.

1. Demonstrate the existence of a Dedekind section which has neither a greatest in the lower nor a least rational number in the upper class.

Employ the theory of Dedekind section to prove the following:—

(a) If  $\alpha > \beta$  and  $\beta > \gamma$ , then  $\alpha > \gamma$ , where  $\alpha, \beta, \gamma$  are all real numbers.

(b) Every bounded set of real numbers possesses an upper and a lower bound.

2. Prove the following:—

(a) Every bounded infinite set possesses at least one limiting point. To whom is this theorem due?

(b) If  $E_1, E_2, \dots, E_n$  denote  $n$  closed sets, then the sets

$$E_1 + E_2 + \dots + E_n \text{ and } E_1, E_2, \dots, E_n$$

are also closed. Illustrate by numerical examples how these results have to be modified when the number of closed sets is not finite.

3. Prove that a set of the first species is enumerable.

$E_1$  and  $E_2$  are two sets of the first species of order  $n_1$  and  $n_2$  respectively. Discuss the order of the set  $M(E_1, E_2)$ .

Either construct a set of the second species which is enumerable or a set whose  $n$ th derivate is a non-dense perfect set.

4. Define after Borel a complete and a bounding limiting set for a given sequence of measurable sets  $\{E_n\}$ , and point out how these two sets are related to each other. Exhibit a set of the first category both as a complete and a bounding limiting set of the same sequence of measurable sets.

If among the sequence  $\{E_n\}$  of measurable sets, there is an infinite number the measure of each of which is not less than  $k$ , then the same is true also of the complete limiting set of the sequence  $\{E_n\}$ . Prove this.

5. Point out the distinction with examples between a set dense-in-itself and an everywhere dense set, and discuss the nature of their complementary sets as regards density. Prove also that each of them has a perfect set as its first derivate.

Resolve the set of rational numbers in  $(0, 1)$  into two others each of which will be dense-in-itself [N.B.—you are to specify the elements of the constituent sets.] In how many ways can this be done?

6. Explain what is meant by the saltus of a function  $f(x)$  at a point  $x$ , and prove that the saltus-function of  $f(x)$  is upper semi-continuous.

For the Riemann function

$$f(x) = \frac{(x)}{1} + \frac{(2x)}{2^2} + \dots + \frac{(nx)}{n^2} + \dots,$$

defined in  $(0, 1)$ , where  $(x)$  denotes the positive or negative excess of  $x$  above the integer nearest to it and is equal to zero where  $x$  is half-way between two

consecutive integers, prove that  $f(x)$  is discontinuous only at the points  $\frac{p}{2q}$  and its saltus at  $\frac{p}{2q}$  is  $\frac{\pi^2}{8q^2}$ , where  $p$  and  $2q$  are relatively prime to each other and  $0 < p < 2q$ . Determine also the points at which the saltus of  $f(x)$  is not less than  $\frac{1}{4}$ .

7. If a continuous function has prescribed values for each point of a set  $E$  in  $(a, b)$ , then its values are determinate at each point of the derivate  $E'$ . Prove this.

A continuous function has the same value at all rational points in  $(0, 1)$ . Deduce its values at the irrational points of the same interval.

Prove that the function

$$\phi(x) + \frac{1}{2!}\phi(2!x) + \dots + \frac{1}{r!}\phi(r!x) + \dots$$

where

$$\phi(x) = 1 - \lim_{n \rightarrow \infty} (\sin \pi x)^{\frac{1}{n-1}},$$

is continuous at all irrational points and determine its values at such points.

8. Explain what you mean by a function of *bounded variation* and its *total variation* in  $(a, b)$ . Obtain the total variation in  $(a, b)$  of a monotone function.

Prove that a function of bounded variation can possess ordinary discontinuities only.

9. Prove the following:—

(a) If  $f(x)$  is a continuous function in  $(a, b)$ , its derivatives  $D^+f(x)$ ,  $D^+f(x)$  are either both continuous on the right or both of them have a discontinuity of the *second kind* on the right.

(b) A continuous function in  $(a, b)$  cannot have at every point in it, a single-valued derivate on the right, which is everywhere infinite and of the same sign.

10. Enunciate a set of *sufficient conditions* for the validity of the theorem

$$\frac{\partial^2 f}{\partial x \partial y} = \frac{\partial^2 f}{\partial y \partial x};$$

and prove it pointing out the steps in your proof where you require them.

Show that for the function

$$f(x, y) = x^2 \tan^{-1} \frac{y}{x} - y^2 \tan^{-1} \frac{x}{y}; \quad f(0, 0) = 0,$$

$$\frac{\partial^2 f(0, 0)}{\partial x \partial y} \neq \frac{\partial^2 f(0, 0)}{\partial y \partial x},$$

and examine  $\frac{\partial^2 f}{\partial x \partial y}$  for continuity at the point  $(0, 0)$ .



## EIGHTH PAPER

**(Theory of Functions of a Real Variable—Second Paper)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. H. P. BANERJEE, M.Sc.} \\ \text{DR. LAKSHMI NARAYAN, M.A., D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Full marks for ANY SIX questions.*

1. Prove rigorously the generalized formula for integration by parts:—

$$\begin{aligned} \int_a^b f(x) \left\{ \int_a^x g(x) dx \right\} dx + \int_a^b g(x) \left\{ \int_a^x f(x) dx \right\} dx \\ = \int_a^b f(x) dx \int_a^b g(x) dx. \end{aligned}$$

2.  $f(x)$  and  $\phi(x)$  are two functions of  $x$  such that  $f(x)$  and also  $f(x) \phi(x)$  are integrable (It) in every interval  $(a, x)$  contained in  $(a, \infty)$  and

$$\int_a^\infty f(x) dx$$

is absolutely convergent. If  $\phi(x)$  be, from and after some fixed value of  $x$ , numerically less than some fixed number, prove that the integral

$$\int_a^\infty f(x) \phi(x) dx$$

exists and is absolutely convergent.

Test for convergence the integral

$$\int_a^\infty \frac{x^r \log x dx}{1+x^3}.$$

3. Prove one of the following theorems of Bonnet:—

(i) If  $f(x)$  be bounded, monotone, and non-increasing in  $(a, b)$  and everywhere  $\geq 0$  and if  $\phi(x)$  be summable in  $(a, b)$ , then

$$\int_a^b f(x) \phi(x) dx = f(a) \int_a^\xi \phi(x) dx$$

where

$$a \leq \xi \leq b.$$

(ii) If  $f(x)$  be bounded, monotone, and non-diminishing in  $(a, b)$  and everywhere  $\geq 0$ , and if  $\phi(x)$  be summable in  $(a, b)$ , then

$$\int_a^b f(x)\phi(x)dx = f(b) \int_a^b \phi(x)dx,$$

where

$$a \leq \xi \leq b.$$

Deduce the second Mean Value Theorem of the Integral Calculus.

4. Define the integral of an unbounded function according to Lebesgue and according to Riemann, and examine the integral

$$\int_a^1 \frac{1}{x} \sin \frac{1}{x} dx$$

for convergence both in the sense of Lebesgue and, in the sense of Riemann.

If  $f_1(x)$  and  $f_2(x)$  are two functions of  $x$  such that

$$\{f_1(x)\}^2 \text{ and } \{f_2(x)\}^2$$

are both summable over a measurable set  $E$ , prove that

$$\left\{ \int_E f_1(x)f_2(x) dx \right\}^2 \leq \int_E \{f_1(x)\}^2 dx \int_E \{f_2(x)\}^2 dx.$$

5. (a) If  $\frac{\partial^2 f}{\partial y \partial x}$  exists everywhere in a neighbourhood of  $(x_0, y_0)$  and is continuous at  $x_0, y_0$ , and if  $\frac{\partial f}{\partial y}$  exists at  $(x_0, y_0)$ , shew that  $\frac{\partial^2 f}{\partial x \partial y}$  will exist and will be equal to  $\frac{\partial^2 f}{\partial y \partial x}$  at  $(x_0, y_0)$ .

(b) Examine for total differentiability the function  $f(x, y)$ , defined as follows:—

$$f(x, y) = x \sin \left( 4 \tan^{-1} \frac{y}{x} \right) \text{ for } x > 0 \text{ and } f(0, y) = 0 \text{ for all values of } y.$$

6. If

$$u_n(x) = \frac{x^{n-1}}{(n-1)!} + n^2 x e^{-n^2 x^2} - (n-1)^2 x e^{-(n-1)^2 x^2},$$

ascertain whether the sum-function of the series

$$\sum_{n=1}^{\infty} u_n(x)$$

is continuous and whether the series is term-by-term integrable.

Examine the series

$$\sum_{n=1}^{\infty} \frac{\cos nx}{n(n!)}.$$

for term-by-term differentiability.

7. (a) If  $f(x)=0$  at every point of Cantor's ternary set and  $f(x)=p$  in each of the complementary intervals of length  $\frac{1}{3^p}$ , then prove that

$$\int_0^1 f(x) dx$$

exists in the Lebesgue sense and find its value.

(b) If a sequence of functions converges to a finite limit almost everywhere in a set  $E$ , prove that, for a given  $\delta$  we can find a set of measure greater than  $m(E) - \delta$  in which the sequence converges uniformly.

8. If  $f(x)$  is integrable, prove that

$$\lim_{h \rightarrow 0} \frac{1}{h} \int^{x+h} |f(t) - a| dt = |f(x) - a|$$

for all values of  $a$ , except when  $x$  belongs to a set of measure zero; that is  $|f(x) - a|$  is the derivative of its indefinite integral for all values of  $a$  and almost all values of  $x$ .

Hence or otherwise prove that the Fourier series of  $f(x)$  is summable  $(c, 1)$  to the sum  $f(x)$  for every value of  $x$  for which

$$\int_0^t |f(x+u) - f(x)| du = O(t).$$

9. State the six different conditions for the convergence of Fourier series at a point, and establish Lebesgue's condition.

10. If  $f(x)$  is summable over a finite interval, prove that we can define an absolutely continuous function  $\phi(x)$  such that

$$|f(x) - \phi(x)| < \delta$$

except in a set of measure less than  $\epsilon$ ,  $\delta$  and  $\epsilon$  being two given positive numbers.

Hence show that if  $f(x)$  is summable over  $(a-\epsilon, b+\epsilon)$

$$\lim_{h \rightarrow 0} \int_a^b |f(x+h) - f(x)| dx = 0.$$

11. Give an example of a continuous function whose Fourier series is non-uniformly convergent at a point.

12. Define 'mean convergence'.

If the numbers  $a_n, b_n$  are such that

$$\frac{1}{2} a_0^2 + \sum_{n=1}^{\infty} (a_n^2 + b_n^2)$$

is convergent, prove that the series is the Fourier series of a function  $f(x)$  of class  $L^2$  and that the partial sums of the series converges in mean to  $f(x)$ .

Explain also why the result is true for Lebesgue integrals only.

## SEVENTH PAPER.

### (Theory of Functions of a Complex Variable—First Paper)

Examiners  $\left\{ \begin{array}{l} \text{MR. H. P. BANERJEE, M.Sc.} \\ \text{DR. H. D. BAGCHI, M.A., Ph.D.} \end{array} \right.$

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

#### FIRST HALF.

1. (a)  $AB, CD$  are two intersecting lines in Argand's diagram, and  $P$  and  $Q$  their middle points. Prove that, if  $AB$  bisects the angle  $CPD$  and  $PA^2 = PB^2 = PC \cdot CD$ , then  $CD$  bisects the angle  $AQB$  and  $QC^2 = QD^2 = QA \cdot QB$ .

(b) If  $(z+1)^2 = \frac{4}{Z}$ , prove that the unit-circle in the  $z$ -plane corresponds to the parabola  $R \cos^2 \frac{\Theta}{2} = 1$  in the  $Z$ -plane and the inside of the circle to the outside of the parabola.

2. Given two surfaces and a definite relation which establishes a point-to-point correspondence between them, find a necessary and sufficient condition that one surface may be conformally represented on the other. Investigate the condition when both the surfaces reduce to planes.

3. Obtain in the form of differential equations the necessary and sufficient condition that a function may be analytic in a given region.

Test whether the function

$$f(z) = e^{-\frac{1}{z^2}} \quad (z \neq 0), \quad f(0) = 0$$

is analytic at  $z=0$ .

4. Prove by contour integration

$$\text{i) } \int_0^{\infty} e^{-x^2 \cos 2a} \cos(x^2 \sin 2a) dx = \frac{\sqrt{\pi}}{2} \cos a,$$

$$(ii) \int_{-\infty}^{\infty} \frac{e^{ax} dx}{1+e^x} = \frac{\pi}{\sin a\pi}, \quad (0 < a < 1).$$

Deduce that

$$\int_{-\infty}^{\infty} \frac{x^{a-1}}{1+x} dx = \frac{\pi}{\sin a\pi}, \quad (0 < a < 1).$$

5. Under certain conditions to be stated, prove that a function  $f(z)$  can be expanded in a series of positive and negative powers of  $z-a$ , convergent at all points in a region. Show that the same function  $f(z)$  can have developments, which are entirely different according to the region considered.

Show also that poles are isolated singular points.

## SECOND HALF.

6. State and prove Mittag-Leffler's Theorem.

Construct a function  $f(z)$  which is analytic except at the poles  $z = \pm 1, \pm 2, \pm 3, \dots$  and is such that  $f(z) - z \cot \pi z$  tends to zero at each of these points.

7. (a) Prove that a power-series of the type

$$\sum_{n=0}^{\infty} a_n z^n$$

converges *absolutely and uniformly* within a certain associated circle ( $\Sigma$ ). Is it possible for the radius of  $\Sigma$  to be *very large* or *very small*?

(b) Find the domains of convergence ( $\Sigma$ ) and ( $\Sigma'$ ) of the two series  $S, T$ , viz.

$$S \equiv \sum_{n=0}^{\infty} \frac{n^2 + 9}{4^n} \cdot z^n \text{ and } T \equiv \sum_{n=0}^{\infty} \frac{n^2 - 1}{9^n} \cdot (z-5)^n.$$

and verify that the circles  $\Sigma$  and  $\Sigma'$  intersect each other *orthogonally*. Also specify the region within which the compound series

$$S + T$$

defines an analytic function of  $z$ .

8. (a) Explain the terms *continuity* and *differentiability*, as applied to a function of a complex variable, viz.  $f(z)$ , and prove from *first principles* that  $f(z)$  must be continuous if it is to be differentiable, but that the converse does not necessarily hold good.

Prove further that if  $f'(z)$  exist at a point,

$$f''(z), f'''(z), \dots, f^{(n)}(z)$$

must also exist. Does this principle always apply to a function of a *real* variable? If the answer be in the negative, assign reasons for it.

(b) Verify that the function

$$a \cos^2 \frac{1}{z} + b \sin^2 \frac{1}{z} + \tan z$$

can be holomorphic at the point  $z=0$ , if and only if, the constants  $a, b$  conform to the relation

$$a+b=1,$$

9. (a) If a function  $f(z)$  be continuous at all points of a simple curve ( $\Gamma$ ) of finite length  $l$ , and if  $|f(z)|$  never exceeds the quantity  $U$ , establish the inequality

$$|I| \leq lU,$$

where

$$I \equiv \int_{(\Gamma)} f(z) dz.$$

(b) Calculate the upper bounds of  $|L|, |M|$ , where

$$L \equiv \frac{1}{10\pi} \cdot \int_{(\Gamma)} \frac{\sin 9z}{(z-7)^5} dz$$

and

$$M = \frac{1}{\pi} \cdot \int_0^\pi \cos(3z - 4 \sin z) dz,$$

it being understood that the path of integration ( $\Gamma$ ) for  $L$  is a circle whose radius = 9 and centre is the pt. 7, and that the path for  $M$  is that part of the real axis which has  $(0, \pi)$  for end-points.

10. (a) Enumerate (without proof) a set of sufficient conditions, which have to be fulfilled by a function  $f(z, t)$  of two independent complex variables  $z$  and  $t$  in order that the function  $\phi(z)$  defined by

$$\phi(z) \equiv \int_{(\Gamma)} f(z, t) dt,$$

(taken along a curve  $\Gamma$  of finite length) may be analytic.

(b) Given that

$$\phi(z) = \int_{-1}^1 \frac{P_n(t)}{z-t} dt,$$

(where the path of integration is a segment of the real axis, viz.  $(-1, 1)$  and  $P_n(t)$  is Legendre's function of positive integral order  $n$ ), investigate the limiting values of the expressions

$$\phi(z+h) - \phi(z), \text{ and } \frac{\phi(z+h) - \phi(z)}{h},$$

when  $|h|$  approaches zero. Hence or otherwise prove that the function  $\phi(z)$  is analytic unless the point  $z$  lies in the segment  $(-1, 1)$ .

## EIGHTH PAPER

**(Theory of Functions of a Complex Variable—Second Paper)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. H. P. BANERJEE, M.Sc.} \\ \text{MR. D. N. SEN, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Full marks for ANY SIX questions.*

1. Investigate the different values of the integral

$$F(z) = \int_{z_0}^z \frac{P(z)}{\sqrt{R(z)}} dz,$$

where  $P(z)$  and  $R(z)$  are two polynomials of which  $R(z)$ , of degree  $n$ , vanishes for  $n$  distinct values of  $z$ ; prove that the periods of the integral are independent of  $z_0$ .

Deduce that

$$\int_{z_0}^z \frac{dz}{\sqrt{R(z)}},$$

where  $R(z)$  of degree four has one or two double roots, has a period; whereas if  $R(z)$  has a triple or quadruple root, the integral does not have periods.

2. Discuss Riemann's surface for the functional relation  $z = w^5 - 5w$ , and indicate the different regions of the  $w$ -planes which correspond to the different quadrants of the five-sheeted  $z$ -plane.

3. Establish the convergence of the double series

$$\sum \sum \left\{ \frac{1}{(u - 2m\tilde{w} - 2n\tilde{w}')^2} - \frac{1}{(2m\tilde{w} + 2n\tilde{w}')^2} \right\},$$

where  $m$  and  $n$  take all integral values, the pair  $m=0, n=0$  being excluded;  $u$  is any complex number whatsoever and  $\tilde{w}, \tilde{w}'$  any two complex numbers whose ratio is not real.

Shew that the series can be re-arranged in the form

$$c_1 u^2 + c_2 u^4 + \dots + c_n u^{2s} + \dots,$$

where

$$c_s = (2s+1) \sum \frac{1}{(2m\tilde{w} + 2n\tilde{w}')^{2s+2}},$$

stating carefully the reason why the re-arrangement is valid.

4. Indicate how to express the co-ordinates of a point on a curve of deficiency one as elliptic functions of a parameter. Apply it to the case of a Bircircular quartic.

5. Define Weierstrass'  $\sigma(z)$  and  $\zeta(z)$ . State how they behave at the corners of the fundamental lattice-work and obtain their pseudo-periodic properties.

6. (a) Shew that

$$\frac{1}{sn^2(iu, k')} + \frac{1}{sn^2(u, k)} = 1.$$

(b) By considering the intersection of the twisted curve

$$x^2 + y^2 = 1, \quad z^2 + k^2 x^2 = 1$$

with the variable plane  $lx + my + nz = 1$ , shew that, if

$$u_1 + u_2 + u_3 + u_4 = 0,$$

then

$$\begin{vmatrix} s_1 & c_1 & d_1 & 1 \\ s_2 & c_2 & d_2 & 1 \\ s_3 & c_3 & d_3 & 1 \\ s_4 & c_4 & d_4 & 1 \end{vmatrix} = 0.$$

7. (a) Shew that the length of the lemniscate

$$r = a \sqrt{\cos 2\theta} \text{ is } 2\sqrt{2}aF\left(\frac{1}{\sqrt{2}}, \frac{\pi}{2}\right).$$

(b) Shew that

$$\int_0^1 \frac{15x^2 - 2x}{\sqrt{x(1-x)(5x+4)}} dx = \frac{16}{5} F\left(\frac{1}{5}, \frac{\pi}{2}\right).$$

8. Obtain the addition formula for  $sn \ u$ .

Express

$$\frac{1 + cn(u+v)cn(u-v)}{1 + dn(u+v)dn(u-v)}$$

as a function of  $sn^2 u + sn^2 v$ .

9. Prove that

$$(a) \quad 2\zeta(2u) - 4\zeta'(u) = \frac{\zeta''(u)}{\zeta'(u)}.$$

$$(b) \quad \frac{\sigma(3u)}{\sigma^3(u)} = 3\zeta(u)\zeta'^2(u) - \frac{1}{4}\zeta''^2(u).$$

10. Shew how the Weierstrassian  $\wp$ -function can be employed to obtain the solution of a quintic. Find the roots of the quintic  $x^5 + ax + b = 0$ .

11. Establish the formula

$$\wp'_1(0) = \wp_2(0)\wp_3(0)\wp_4(0).$$

12. Distinguish between the three kinds of Abelian integrals, and illustrate your remark by an example of each kind. State and prove Abel's theorem.



SEVENTH PAPER.

(Theory of Numbers—First Paper)

Examiners—  $\left\{ \begin{array}{l} \text{MR. M. GUPTA M.Sc.} \\ \text{MR. P. L. GANGOOLY, M.A., B.L.} \end{array} \right.$

*The questions are of equal value.*

*Answer six questions only.*

1. (a). If  $p$  is a prime and  $a$  relatively prime to  $p$ , prove that

$$a^r \equiv +1 \text{ or } -1 \pmod{p^2},$$

$$\text{where } r = \frac{p(p-1)}{2}.$$

(b) If  $a = m^2 - n^2$ ,  $b = 2mn$ ,  $c = m^2 + n^2$ , where  $m$  and  $n$  are integers, prove that one of  $a$ ,  $b$ ,  $c$  is divisible by 5 and that

$$abc \equiv 0 \pmod{60}.$$

2. Determine the exponent of the highest power of a prime  $p$  contained in  $n!$ . Work out the case for which  $p = a$  and  $n = a^m - 1$ .

If each of the integers  $a$  and  $b$  is relatively prime to a third integer  $t$ , shew that

$$\frac{(a+b+t)!}{a! b! t!} \equiv 0 \pmod{k+t},$$

where  $k = a$  or  $= b$ .

3. Prove that every odd perfect number, if it exists, must be of the form  $p^{4\lambda+1} \cdot N^2$ , where  $p$  is a prime of the form  $4k+1$ .

Shew that the sum of the reciprocals of all the divisors of a perfect number (including itself and unity) is equal to 2.

4. When are two numbers said to form an amicable pair? Quote Paganini's pair and cite Fermat's rule for the discovery of amicable pairs.

Give Euler's investigation on the discovery of amicable pairs of the form  $apq$ ,  $ar$ , where  $a = 2^n$  and  $p, q, r$  are all distinct primes which do not divide  $a$ .

5. How does Lucas generalize Euler's  $\phi$ -function and when does the generalized function vanish? Denoting Lucas's function by  $\psi$ , prove that

$$\psi(nn') = \psi(n)\psi(n'),$$

where  $n$  and  $n'$  are two integers relatively prime to each other.

Prove the following:—

$$\sum_{n=1}^{\infty} \frac{\phi(n)}{n^s} = \frac{S_{s-1}}{S_s}, \quad s > 2,$$

where

$$S_m = \frac{1}{1^m} + \frac{1}{2^m} + \frac{1}{3^m} + \dots$$

6. Explain when an integer  $a$  is said to *appertain* to the exponent  $d \pmod{m}$ ,  $a$  and  $m$  being relatively prime to each other. Obtain  $d$  when  $a=4$ ,  $m=19$ .

• Prove that if  $p$  is a prime, there are  $\phi(d)$  integers which appertain to the same exponent  $d \pmod{p}$ . Verify by a numerical example that the theorem is not true when  $p$  is not a prime.

7. Prove that the necessary and sufficient condition in order that the congruence

$$x^n \equiv D \pmod{p},$$

may be possible is that

$$D^{\frac{p-1}{\delta}} \equiv 1 \pmod{p},$$

where  $p$  is a prime and  $\delta$  the G.C.M. of  $n$  and  $p-1$ .

Deduce that the congruence

$$x^d \equiv 1 \pmod{p}$$

possesses exactly  $d$  roots,  $d$  being a divisor of  $p-1$ .

Solve

$$11x^7 \equiv 47 \pmod{109},$$

given that in  $d$   $47 \equiv 5$ , in  $d$   $11 \equiv 107$ , in  $d$   $4 \equiv 78 \pmod{108}$ .

8. When is an integer  $a$  said to be a *quadratic residue* of another integer  $m$  relatively prime to  $a$ .

Prove that the product of a *residue* and a *non-residue* is a non-residue.

If  $P$  and  $P'$  denote respectively the products of the positive quadratic residues and non-residues of a prime  $p$ , which are less than  $p$ , shew that

$$-P \equiv P' \equiv (-1)^{\frac{p-1}{2}} \pmod{p}.$$

9. Shew how to solve the congruence

$$x^2 \equiv D \pmod{2^\pi}, \pi \geq 3,$$

when it is possible and that it is possible when  $D \equiv 1 \pmod{8}$ . Determine also the number of roots of this congruence.

Solve  $5x^2 - 6x + 3 \equiv 0 \pmod{11^2}$ .

10. Explain why it is necessary to assume  $p$  to be an odd positive integer in defining the *Legendre's symbol*  $\left(\frac{a}{p}\right)$ . How does Jacobi generalize the same symbol and also define  $\left(\frac{m}{-P}\right)$ , where  $P$  is an odd positive integer?

Prove the following:—

$$(i) \quad \left(\frac{-1}{P}\right) = -(-1)^{\frac{P-1}{2}}, \text{ where } P \text{ is negative.}$$

$$(ii) \quad \sum_{m=1}^{P-1} \left(\frac{m}{P}\right) \sin \frac{m\pi}{P} \equiv 0, \text{ when } P \equiv 3 \pmod{4}.$$

## EIGHTH PAPER.

**(Theory of Numbers—Second Paper)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. M. GUPTA, M.Sc.} \\ \text{,, H. P. BANERJEE, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Answer SIX questions only.*

1. If  $P$  is a given positive integer not containing a square factor and  $a$  and  $b$  any two positive integers less than  $P$  which respectively make

$$\left(\frac{a}{P}\right) = +1, \quad \left(\frac{b}{P}\right) = -1,$$

show that all odd positive integers  $x$  for which

$$\left(\frac{D}{x}\right) = +1,$$

are given by

$$x \equiv k + (\eta - k)P \pmod{4P},$$

where  $D = \pm P \equiv 3 \pmod{4}$  and

$\eta = +1$  or  $-1$  according as  $k = a$  or  $= b$ .

Work out the case when  $D = 11$ .

2. If  $x, y$  and  $x', y'$  are two sets of variables such that

$$x = \alpha x' + \beta y', \quad y = \gamma x' + \delta y',$$

$\alpha, \beta, \gamma, \delta$  being all integers, shew that the condition

$$\alpha\delta - \beta\gamma = \pm 1,$$

is both necessary and sufficient in order that the variables may be all integers at one and the same time.

A binary quadratic form  $(a, b, c)$  is converted into another form  $(a', b', c')$  by the above unitary substitution. Investigate the relations which exist between the roots of these two forms.

3. Prove the following:—

(a) If two forms are both properly and improperly equivalent to each other, then each of them is improperly equivalent to itself.

(b) If a *unimproper* substitution whose third coefficient vanishes converts a form into itself, then it is necessarily an ambiguous form.

Obtain all the *improper automorphs* of the form  $(7, 7, 6)$ .

4. Explain what is meant by the *fundamental solution*  $(T, U)$  of the equation

$$t^2 - Du^2 = \sigma^2.$$

If  $(t, u)$  denotes any *positive* solution of this equation shew that it is identical with one of the solutions  $(T_n, U_n)$ , where

$$\left(\frac{T+U\sqrt{D}}{\sigma}\right)^n = \frac{T_n+U_n\sqrt{D}}{\sigma}$$

$n$  being a positive integer.

If  $p$  is an odd positive prime and  $\sigma = 1$ , shew that

$$T_p \equiv T, U_p \equiv \left(\frac{D}{p}\right) U \pmod{p}.$$

5. Every form of *negative* determinant is properly equivalent to a *reduced* form. Prove this.

Examine for equivalence the forms  $(4, 3, 7)$ ,  $(28, 17, 11)$ , and determine the substitution which converts one of them into the other.

6. Express the conditions of reduction of a binary quadratic form of *positive* determinant in terms of its roots.

Obtain all the reduced forms for  $D=37$  and exhibit the period of the form  $(7, 3, -4)$ .

7. If  $m$  is an odd positive integer primitively representable through a form of determinant  $-2$  and  $p$  any prime factor of  $m$ , shew that

$$p \equiv 1 \text{ or } \equiv 3 \pmod{8}.$$

Obtain *all* the primitive representations of 17 through the form  $(1, 1, -1)$ .

8. Prove that for a given determinant  $D$  there exists a certain number of characters whose product is positive for every genus of  $D$ .

Ascertain, *a priori*, those characters for

$$D = 2^3 \cdot 7^2 \cdot 11$$

whose product for every genus = +1.

Exhibit the different genera for  $D = -24$ .

9. Prove the following.---

(a) The *duplication* of any pro-primitive class produces a class in the principal genus.

(b) The number of actually existing genera is *at most* equal to the number of pro-primitive ambiguous classes.

Obtain all the pro-primitive ambiguous forms of the type

$$\left(2b, b, \frac{b+b'}{2}\right)$$

for the determinant  $D = -120$ ,

10. If  $D = -P \equiv 3 \pmod{4}$ , where  $P$  is a positive integer not involving a square factor and  $h$  denotes the number of pro-primitive classes for the determinant  $D$ , shew that

$$h = 2 \sum_{a=1}^{\frac{1}{2}(P-1)} \left(\frac{a}{P}\right),$$

provided we agree to put  $\left(\frac{a}{P}\right) = 0$ , whenever  $a$  is not prime to  $P$ .

Work out the case when  $D = -57$ .

## SEVENTH PAPER.

**(Theory of Groups—First Paper)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. M. GHOSH, M.Sc.} \\ \text{,, N. K. MAJUMDAR, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Candidates are required to answer SIX questions only.*

1. (a) If  $b^{-1}ab = a^k$ , prove that  $b^{-y}a^xb^y = a^{xk^y}$ ,  $y$  being a positive integer and hence show that

$$(b^y a^x)^t = b^y a^{x(k^y - 1) - (k^y - 1)},$$

$y$  and  $t$  being positive integers.

(b) With the same assumption as in (a) show that the transform of

$$b^y a^x \text{ by } b^t a^r \text{ is } b^y a^{xk^t + t - tk^y}.$$

2. (a) Show how to find the transformation of one permutation by another in the simplest way.

(b) Prove that every permutation can be expressed as the product of transpositions.

Express

$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\ 3 & 8 & 6 & 9 & 2 & 4 & 10 & 5 & 1 & 7 \end{pmatrix}$$

as product of transpositions.

(c) Show that every even permutation can be expressed as the product of circular permutations of order 3.

3. (a) Define a Hermitian Form and prove that a Hermitian Form remains Hermitian by linear substitution.

(b) Show that the substitution

$$\{-x_1 - x_2 - x_3 - x_4 - \dots, x_2 + {}^2c_1x_3 + {}^3c_1x_4 + \dots, \\ -x_3 - {}^3c_2x_4 - {}^4c_2x_5 - \dots, \dots, (-1, {}^mx_m)\}$$

is of order 2.

4. (a) Define *Inversion* and *Translation*, and show that an inversion followed by a translation is equivalent to an inversion.

(b) Show that every even number of successive reflexions is equivalent to four successive reflexions.

5. (a) Define a *Group* and prove that the substitutions

$$(x, y), \left(\frac{y}{x}, \frac{1}{x}\right), \left(\frac{1}{y}, \frac{x}{y}\right), (y, x), \left(\frac{x}{y}, \frac{1}{y}\right), \left(\frac{1}{x}, \frac{y}{x}\right)$$

form a group.

(b) If  $G$  and  $H$  are two permutable groups of order  $m$  and  $n$ , while the order of their greatest common subgroup is  $\delta$  and of  $\{G, H\}$  is  $\lambda$ , show that  $mn = \lambda\delta$ .

(c) Show that an Abelian group whose order is divisible by a prime  $p$  contains an element of order  $p$ .

6. (a) Define a Factor Group and show that a factor group of an Abelian group is Abelian.

(b) If  $H$  is a normal subgroup of  $G$  prove that to each subgroup of  $G/H$  corresponds a subgroup of  $G$  containing  $H$ .

(c) If  $G/H$  is Abelian, show that  $H$  contains the commutator of any two elements of  $G$ .

7. (a) Prove that every prime power group contains normal elements other than the identity and hence show that every group of order  $p^n$  is Abelian,  $p$  being prime.

(b) If every Sylow subgroup of a group  $G$  is normal in  $G$ , show that  $G$  is the direct product of these Sylow subgroups.

8. Define *Commutant*. If  $c \equiv a^{-1}b^{-1}ab$  is permutable with both  $a$  and  $b$ , show that  $c^{p^r - 1}$  is the commutator of  $b^p a^p$  and  $b^p a^p$ .

Hence or otherwise show that if  $ba = ab^p$  and  $ab = ba^p$ , the commutant of  $\{a, b\}$  is cyclic.

9. (a) Show that every subgroup of order  $p^s$  in a group of order  $p^a$  is contained normally in a subgroup of order  $p^{a+1}$ ,  $p$  being prime.

(b) Show that the group of inner automorphisms  $A$  of a group  $G$  is not cyclic, unless  $G$  is Abelian when  $A \equiv 1$ .

10. (a) Define an *Invariant* and show that every finite homogeneous-linear group has a positive Hermitian form as an invariant.

(b) If  $a\bar{\beta} = 1$ , show that

$$\frac{1}{2}x(\gamma_2 - a\gamma_3) + \frac{1}{2}\gamma_2(x_2 - a^{-1}x_3) - a^2x_1\gamma_3 - a^{-2}\gamma_1x_3$$

is an invariant of

$$x_1' = ax_1 + x_2, \quad x_2' = ax_2 + x_3, \quad x_3' = ax_3, \quad y_1' = \beta\gamma_1 + \gamma_2,$$

$$y_2' = \beta\gamma_2 + \gamma_3, \quad y_3' = \beta\gamma_3.$$

## EIGHTH PAPER.

### (Theory of Groups—Second Paper)

Examiners—  $\left\{ \begin{array}{l} \text{MR. M. GHOSH, M.Sc.} \\ \text{DR. S. D. MUKHERJEE, M.A., Ph.D.} \end{array} \right.$

*The questions are of equal value.*

*Candidates are required to answer SIX QUESTIONS only.*

1. (a) Explain any method for finding a function belonging to a group and illustrate your method by finding the general form of functions belonging to the group  $\{1, (x_2 x_3)\}$  where  $x_1, x_2, x_3$  are the roots of  $x^3 - c_1 x^2 + c_2 x - c_3 = 0$ .

(b) Show that the group of the function.

$$\begin{vmatrix} 1, & x_1, & x_1^2, & \dots, & x_1^{n-1} \\ 1, & x_2, & x_2^2, & \dots, & x_2^{n-1} \end{vmatrix}$$

$$1, \quad x_n, \quad x_n^2, \quad \dots, \quad x_n^{n-1}$$

consists of even substitutions only and hence find the order of this group.

2. (a) If a rational function  $\phi(x_1, x_2, \dots, x_n)$  remains unaltered by all the substitutions which leave another rational function  $\psi(x_1, x_2, \dots, x_n)$  unaltered show that  $\phi$  is a rational function of  $\psi$  and the elementary symmetric functions of  $x_1, x_2, \dots, x_n$ . What inference can you draw when  $\phi$  and  $\psi$  belong to the same group.

(b) If  $x_1, x_2, x_3$  are the roots of the cubic

$$x^3 - c_1x^2 + c_2x - c_3 = 0,$$

express the roots in terms of  $\psi$  where

$$\psi = x_1 + \omega x_2 + \omega^2 x_3.$$

State the general theorem of which this example is a particular case.

3. (a) Prove that the symmetric group on  $n$  letters contains no self-conjugate subgroup besides itself, the identity and the alternating group when  $n > 4$ .

(b) If a group contains all the circular substitutions on  $m+2$  letters, prove that it contains all circular substitutions on  $m$  letters.

4. (a)  $F(x)=0$  and  $G(x)=0$  are two equations having their coefficients in a domain  $R$  and  $F(x)=0$  is irreducible in  $R$ . If one root of  $F(x)=0$  satisfy  $G(x)=0$  show that  $F(x)$  is a divisor of  $G(x)$  in  $R$ .

(b) Explain clearly what is meant by Galois Resolvent and find the Galois Resolvent of  $x^3 + x^2 + x + 1 = 0$  in the domain of rational numbers.

What is its Galois Revolvent in the domain (i)? Give reasons for your answer.

5. (a) Define the group of an equation and show that for a given equation it is unique provided the domain is specified.

(b) Find the group of—

(i)  $(x - a_1)(x - a_2) \dots (x - a_n) = 0$  in  $\Omega(a_1, a_2, \dots, a_n)$

ii)  $x^2 - 2$  in  $\Omega(1)$ .

iii)  $x^3 - 3(c^2 + c + 1)x + c^2 + c + 1(2c + 1) = 0$  in  $\Omega(1, c)$ .

6. (a) Define a transitive group and show that if an equation is irreducible in a domain  $R$ , its group for  $R$  is transitive; if reducible, its group is intransitive.

(b) Explain clearly the meaning of *Adjunction*, and prove that by the adjunction of a rational function belonging to a subgroup  $H$  of  $G$ , the group  $G$  of the equation is reduced precisely to the subgroup  $H$ .

7. Explain Gauss' method for solving cyclic equations and illustrate the method by considering the equations

$$x^4 - 1 = 0 \text{ and } x^{17} - 1 = 0.$$

8. (a) Define a Cyclotomic Equation and show that it is irreducible in the domain of all rational numbers.

(b) If  $p$  be a prime number and if  $A$  be a quantity lying in  $R$  but not the  $p$ th power of a quantity in  $R$ , prove that  $x^p - A$  is irreducible in  $R$ .

9. (a) Define Metacyclic and Galoisian equations and prove that a Metacyclic equation is always Galoisian.

(b) Show that the group of a Galoisian equation of prime degree  $p$  is a subgroup of the Metacyclic group of degree  $p$ .

10. Write a short note on the construction of regular polygons by ruler and compasses.

### SEVENTH PAPER.

#### (Finite Differences—First Paper)

Examiners—  $\left\{ \begin{array}{l} \text{MR. P. L. GANGOOLY, M.A., B.L.} \\ \text{,, P. N. MITRA, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Not more than SIX questions to be attempted.*

1. State and prove the secondary form of Maclaurin's theorem. Hence deduce

$$\Delta^n u = \frac{d^n u}{dx^n} + \frac{\Delta^n O^{n+1}}{(n+1)!} \frac{d^{n+1} u}{dx^{n+1}} + \frac{\Delta^n O^{n+2}}{(n+2)!} \frac{d^{n+2} u}{dx^{n+2}} + \dots$$

2. Prove the relations

$$\Delta^n u_m = \Delta^n u_{m-n} + n \Delta^{n-1} u_{m-n-1} + \frac{n(n-1)}{2!} \Delta^{n-2} u_{m-n-2} + \dots$$

$$\frac{\Delta^{m+1} O^{n+1}}{m+1} = \Delta^m O^n + n \Delta^m O^{n-1} + \frac{n(n-1)}{2!} \Delta^m O^{n-2} \dots + \frac{n!}{(n-m)!}$$

3. If  $x = e^\theta$  show that

$$\left( \frac{d}{d\theta} \right)^n = \frac{\Delta O^n}{1} x \frac{d}{dx} + \frac{\Delta^2 O^n}{2!} x^2 \frac{d^2}{dx^2} + \frac{\Delta^3 O^n}{3!} x^3 \frac{d^3}{dx^3} + \dots$$

Prove that

$$f(x\Delta)(xE)^m u_x = (xE)^m f(x\Delta + m) u_x.$$

4. Sum the series

$$\frac{10}{1.2.3.4} + \frac{14}{2.3.4.5} + \frac{18}{3.4.5.6} \dots n \text{ terms ;}$$

$$\frac{1}{\cos \theta \cos 2\theta} + \frac{1}{\cos 2\theta \cos 3\theta} + \frac{1}{\cos 3\theta \cos 4\theta} + \dots n \text{ terms.}$$



5. Shew that

$$\cot^{-1}(p+qn+rn^2)$$

is integrable in finite terms whenever

$$q^2 - r^2 = 4(pr - 1).$$

Evaluate

$$\sum \tan^{-1} \frac{1}{10x^2 - 24x + 12}.$$

6. Prove that if the function  $\phi(x)$  be positive in sign but diminishing in value as  $x$  varies continuously from  $a$  to  $a$ , then the series

$$\phi(a) + \phi(a+1) + \phi(a+2) + \dots \text{ad inf.}$$

will be convergent or divergent according as

$$\int_a^{\infty} \phi(x) dx \text{ is finite or infinite.}$$

Investigate the convergence of the series

$$1 + \frac{a}{b}t + \frac{a(a+1)}{b(b+1)}t^2 + \frac{a(a+1)(a+2)}{b(b+1)(b+2)}t^3 + \dots$$

7. Define the divided difference

$$f(a_0, a_1, a_2, \dots, a_n) \text{ of the function } f(u)$$

and prove that

$$f(a_0, a_1, a_2, a_3) =$$

$f(a_0),$	$f(a_1),$	$f(a_2),$	$f(a_3)$	$a_0,$	$a_1,$	$a_2,$	$a_3$
$a_0^2,$	$a_1^2,$	$a_2^2,$	$a_3^2$	$a_0^2,$	$a_1^2,$	$a_2^2,$	$a_3^2$
$a_0,$	$a_1,$	$a_2,$	$a_3$	$a_0,$	$a_1,$	$a_2,$	$a_3$
1,	1,	1,	1	1,	1,	1,	1

8. Prove Newton's formula for unequal intervals.

Hence deduce the following Gauss formula:—

$$u_{n+x} = u_n + x \Delta u_n + \frac{x(x-1)}{2!} \Delta^2 u_{n-1} + \frac{x(x-1)(x+1)}{3!} \Delta^3 u_{n-1} + \dots$$

9. What are Central Differences?

Demonstrate Newton-Stirling central difference formula

$$u_x = u_0 + x\mu\delta u_0 + \frac{x^2}{2!}\delta^2 u_0 + \frac{x(x^2-1)}{3!}\mu\delta^3 u_0 + \dots$$

10. The following table, giving the values of the moon's longitude at equal intervals of time, contains an error in one, and only one, entry:—

389°	36'	58''·6
345	32	44·3
351	30	30·9
357	30	41·8

(360° +)	3	34	27.5
	9	41	58.6
	15	54	6.3
	22	11	30.5

Utilize the theory of finite differences to detect the position of the error and correct it.

—

### EIGHTH PAPER.

#### (Finite Differences—Second Paper)

Examiners— { DR. S. M. GANGULI, D.Sc.  
                  ,, S. C. DHAR, D.Sc.

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Point out the various analogies with differential equations that you have noticed in solving linear difference equations, and show that in the general solution of a difference equation, the arbitrary constants introduced are periodic functions.

Find the general solution of the equation

$$u_{x+2} - a(a^x + 1)u_{x+1} + a^{x+1}u_x = \frac{1}{(x+1)(x+2)}$$

when a particular solution of the above equation with the right hand member absent is known to be

$$u_x = a^{\frac{1}{2}x(x-1)}.$$

2. Solve any three of the following equations:—

(1)  $u_{x+2} + 2u_{x+1} + u_x = x(x-1)(x-2).$

(2)  $u_{x+2} - n^2 u_x = \tan nx.$

(3)  $\Delta^3 u_x - 3\Delta^2 u_x + 2\Delta u_x = 0.$

(4)  $x(x+1)(x+2)\Delta^3 u + x(x+1)\Delta^2 u - 2x\Delta u + 2u = x(x+1)(x+2).$

3. What is the *indirect* integral of a given difference equation? Show that the complete primitive and indirect integrals derived from it constitute a cycle such that each can be derived from the other.

Find the different complete primitives of the equation

$$y = \frac{\Delta y}{2x+1} \left( x^2 + \frac{\Delta y}{2x+1} \right).$$

4. Integrate in series the difference equation

$$x(x-a)u_x - (x-1)(2x-a-1)u_{x-1} - 3(x-2)(x-1)u_{x-2} = 0.$$

5. Solve the equations:—

$$(a) \quad 6u_x, y - 5u_{x+1}, y - 1 + u_{x+2}, y - 2 = 0,$$

$$(b) \quad u_{x+2} - 3 \frac{du_{x+1}}{dy} + 2 \frac{d^2 u_x}{dy^2} = V,$$

where  $v$  is a function of  $x$  and  $y$ .

$$(c) \quad \left. \begin{aligned} u_{x+2} + p v_{x+1} - q u_x &= a^x \\ v_{x+2} - u_{x+1} - p v_x &= a^{-x} \end{aligned} \right\},$$

where  $p$  and  $q$  do not involve  $x$ .

6. Find a function
- $f(x)$
- continuous for real values of the argument, differentiable and satisfying the functional equation

$$f(x) + f(y) = f(xy).$$

Find the general equation of the curve in which the product of two segments of a straight line drawn through a fixed point in its plane to meet the curve shall be invariable.

7. Solve the following equations:—

$$(1) \quad \frac{\psi(r)}{1 + \psi(x)} + x \frac{\psi(-x)}{1 + \psi(-x)} = 1.$$

$$(2) \quad \phi(\pi - x) = \frac{d\phi(x)}{dx}.$$

8. A person places money in the funds, but gradually contracting expensive habits, he spends the first year the whole interest, the second twice that of the remaining stock, the third three times that of what is left, and so on. How long will his property last, and in what year is his expenditure greatest?

9. Explain how you will mathematically represent the probability of an event happening in a number of trials.

A general orders 2 men drawn by lot out of a body of 100 rebels to be shot. Find the probability that (a) one, (b) two, (c) none of the ringleaders are chosen, assuming there are 10 ringleaders.

The census population of a town is  $p$  in 1920 and  $p'$  in 1930. If  $r$  denotes the net annual rate of increase per unit of population, prove that

$$\log(1+r) = \frac{1}{10} (\log p' - \log p).$$

10. Explain the need for interpolation in statistical work and the assumption made in using interpolated values.

The following table gives the export of tea in tons per year from a certain country. Find the missing value for the year 1931:—

Year	Tons
1927	650
1928	840
1929	1248
1930	1849
1931	—
1932	2708
1933	3570
1934	5915

11. Explain what is meant by—

- (a) linear regression, (b) correlation coefficient, (c) regression coefficient.

If  $\sigma_x$  and  $\sigma_y$  are the standard deviations of two sets of variates denoted by  $x$ 's and  $y$ 's and if  $r$  represents the regression coefficient, find the condition that there is no correlation between the two sets. Is the condition also sufficient? Give reasons for your answer.

## SEVENTH PAPER

### (Modern Geometry—First Paper)

Examiners

DR. S. M. GANGULI, D.Sc.

„ S. D. MUKHERJEE, M.A., Ph.D.

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Establish the following:—

Any one-dimensional geometric form, consisting of four elements, is projective with any of the forms derived from it by interchanging the elements in pairs.

Given three points of a harmonic range, show how by the use of the ruler only the fourth may be determined, giving full reasons for the construction.

2. Explain what is meant by the *orthogonal* projection of a plane figure on another plane.

Show that the relation between a circle and its orthogonal projection is identical with the relation between the auxiliary circle of an ellipse and the ellipse itself.

3. Prove that if two triangles are in homology, the points of intersection of the sides of one with the non-corresponding sides of the other lie on a conic and the straight lines joining the vertices of one with the non-corresponding vertices of the other all touch another conic.

4. Show how it is possible to project *two pairs* of lines into pairs of lines containing angles of given magnitudes and at the same time any other given line into the line at infinity.

Examine the reality or otherwise of this projection.

Show how to project any five points into five *concyelic* points and any line to infinity.

5. Enunciate and prove Pascal's Theorem on the *mystic hexagram*, and show that the theorem provides a necessary and sufficient condition that six coplanar points may lie on a conic.

6. Given five points on a conic, determine the points of intersection of the curve with a given straight line.

Prove that the complete quadrilateral formed by four tangents to a conic and the complete quadrilateral formed by their four points of contact have the same diagonal triangle.

7. Show how Desargue's Theorem can be used to construct by points a conic through five given points.

If a transversal cuts two tangents to a conic in  $B$  and  $B'$ , their chord of contact in  $A$  and the conic itself in  $P$  and  $P'$ , prove that  $A$  is a double point of the involution determined by the pairs of points  $P$ ,  $P'$  and  $B$ ,  $B'$ .

8. If two complete quadrangles have the same diagonal points, their eight vertices lie either by four on two straight lines or else they all lie on a conic.

Prove this, giving details of your arguments.

9. Give complete proof of the theorem that a pencil in involution is either such that every ray is at right angles to its conjugate, or else it contains one and only one pair of conjugate rays including a right angle.

10. Establish and generalize by projection the following theorem:—

If a conic circumscribing a triangle passes through the orthocentre, it is a rectangular hyperbola.

11. Prove that if two triangles are both self-conjugate with regard to a given conic, their six vertices lie on a conic.

Apply the principles of reciprocation to prove that the six sides of the above two triangles touch another conic derivable from the first by some geometrical process.

## EIGHTH PAPER

## (Modern Geometry—Second Paper)

Examiners—  $\left\{ \begin{array}{l} \text{DR. R. N. SEN, M.A., PH.D.} \\ \text{MR. R. C. BASU, M.A.} \end{array} \right.$

*The questions are of equal value.*

N.B.—Attempt ANY SIX questions.

1. Prove that a definite projectivity can, in general, be established between two coplanar fields  $(\sigma)$  and  $(\sigma')$ , when four pairs of corresponding points are given. Note the exceptional case.

Two complete quadrangles  $ABCD$ ,  $A'B'C'D'$  are such that five of the intersections such as  $(AB, A'B')$  are collinear. Prove that the sixth intersection is a fixed point collinear with the other five.

2. Define a harmonic range, and deduce that if  $A, B$  separate  $C, D$  harmonically, then  $C, D$  separate  $A, B$  harmonically.

If  $ABCD$  is perspective to  $CBAD$ , show that  $A, C$  are harmonic conjugates with respect to  $B, D$ .

3. In how many ways can two flat pencils be perspective to one another? If  $a, b, c$  and  $a', b', c'$  be two triads of rays in the same plane concurring in the different points  $L, L'$ , establish the projectivity

$$(a \ b \ c \dots) \wedge (a' b' c' \dots)$$

Given any ray belonging to one of the pencils, determine the second point where meets the locus of points of intersection of the corresponding rays of the two projective pencils.

4. Prove that six lines 1, 2, 3, 4, 5, 6 are tangents to the same conic if the three lines (12, 45), (23, 56), and (34, 61) are concurrent.

Prove that the sixty different points of concurrence obtained by taking these six tangents in all possible ways are themselves collinear three by three.

5. Let  $M$  be any point and  $n$  any tangent of a conic. Then if  $K$  is a variable point on the conic,  $k$  its tangent, and we make the line  $MK$  correspond to the point  $nk$ , show that the pencil described by  $MK$  is projective to the row described by  $nk$ .

$P$  is the pole of  $p$  with respect to a conic, and  $q$  is a variable line through  $P$  meeting  $p$  at  $O$ . If  $Q$  is the point conjugate to  $O$ , show that the pencil  $(q)$  is projective to the row  $(Q)$ .

6. A surface  $\rho$  is generated by the lines of intersection of corresponding planes of two projective axial pencils whose axes are non-coplanar. Prove that—

(i) the section of  $\rho$  by any plane is a conic or a line-pair ;

(ii) through any line not lying wholly on  $\rho$ , we cannot draw more than two tangent planes.

7. If  $A, B, C$  and  $A', B', C'$  are two triads of points on a conic, and  $a, b, c$  and  $a', b', c'$  be tangents at these points, show that the axis of the projectivity

$(A, B, C, \dots) \bar{\wedge} (A', B', C', \dots)$  is the polar of the centre of the projectivity  $(a, b, c, \dots) \bar{\wedge} (a', b', c', \dots)$ .

If two coplanar conics touch at  $S$ , show that, by putting them both into perspective with the pencil  $(S)$ , they become two corresponding figures in a plane homology.

8. Define a complex point and a complex line. Show that a real point and a complex point are conjoint with one and only one line.

Show how to draw the tangents from a complex point to a real conic.

9. Given three base points  $A, B, C$  on a conic whose indices are  $0, 1, \infty$  respectively, show how to arrive at a point  $D$ , whose index is a given number  $p/q$ , where  $p$  is a negative and  $q$  a positive integer.

Let  $R$  be the point where the tangent at  $C$  meets  $AB$ . Prove that the involution whose centre is  $R$  has the cast equation  $x+x'-1=0$ .

10. Define the homogeneous co-ordinates of a point referred to a triangle  $ABC$  and a unit point  $G$ .

If  $(x, y, z)$  be the homogeneous co-ordinates of a point  $P$ , show that the equation of any straight line can be written in the form  $lx+my+nz=0$ .

In what geometrical relation does the conic  $xy-z^2=0$  stand to the triangle  $ABC$  and the unit point  $G$ ?

11. Prove, after Hilbert, that, given two sets of points  $A, B, C$  and  $A', B', C'$  so situated respectively upon two intersecting straight lines, none of them fall at the intersection of these lines. If  $CB'$  is parallel to  $BC'$  and  $CA'$  is parallel to  $AC'$ , then  $BA'$  is parallel to  $AB'$ .

Does the proof depend on all the axioms given by Hilbert?

## SEVENTH PAPER

### (Non-Euclidean Geometry—First Paper)

Examiners—  $\left\{ \begin{array}{l} \text{MR. M. GHOSH, M.Sc.} \\ \text{DR. R. N. SEN, M.A., PH.D.} \end{array} \right.$

*The questions are of equal value.*

*Candidates are required to answer SIX questions only.*

1. By assuming the axioms of connection, order, and congruence as given by Hilbert prove that—

'In a plane  $\alpha$  there can be drawn through any point  $A$ , lying outside of a straight line  $a$ , at least one straight line which does not intersect the line  $a$ .'

What alterations should be made in the above statement so that it may form the basis of Euclidean Geometry? Show also that the statement thus altered does not follow from the axioms mentioned above.

2. 'Every straight line  $a$ , which lies in a plane  $\alpha$ , divides the remaining points of this plane into two regions having the following properties: Every point  $A$  of the one region determines with each point  $B$  of the other region a segment  $AB$  containing a point of the straight line  $a$ . On the other hand, any two points  $A, A'$  of the same region determine a segment  $AA'$  containing no point of  $a$ .'

Prove the above proposition and at every step state the axiom or axioms used there.

Prove after Hilbert that if two angles are congruent their supplementary angles are also congruent.

3. What are the objections in defining parallel straight lines as equidistant straight lines?

$AB$  and  $CD$  are two equal perpendiculars drawn to a straight line  $BD$  on the same side. From a point  $E$  lying on  $AC$  between  $A$  and  $C$ ,  $EF$  is drawn perpendicular to  $BD$ . If  $EF > AB$ , without assuming the Postulate of Archimedes, prove that the angles  $BAC, DCA$  are obtuse.

4. Show that Euclid's *parallel postulate* can be deduced by assuming the existence of a triangle similar to any given triangle.

Show how Thibaut proves by the method of rotation that the sum of the angles of a triangle is equal to two right angles. Expose fully the fallacy involved in his proof.

5.  $AQ$  and  $BQ$  are two axes of a horocycle and the tangent at  $B$  meets  $QA$  in  $D$ . If  $AD=u$  and  $BD=t$ , prove that

$$e^u = \cosh t$$

$$AB = S \tanh t,$$

where  $S$  is the arc of a horocycle such that the tangent at one end is parallel to the axis through the other in the opposite sense to that in which the axis is drawn.

If  $C$  is a point on the horocycle considered above, the axis through which is when produced backwards parallel to the tangent at  $B$ , and if the axis through  $E$ , the mid-point of  $BC$ , meets the tangent at  $B$  in  $F$ , show that

$$EF = \log 2 - \frac{1}{2} \log 3$$

(the constant being unity).

6. Show that two parallel straight lines approach each other continually, and their distance apart eventually becomes less than any assigned quantity.

In any triangle in which one vertex is at infinity show that the exterior angle formed by producing any side is greater than either of the interior opposite angles.

7. If  $\alpha$  is the angle of parallelism corresponding to the distance  $a$ , prove that

$$\tanh a = \cos \alpha,$$

and hence deduce that

$$\tan \frac{1}{2} II(p) = e^{-p}.$$



8. Show that two non-intersecting straight lines always have a common perpendicular. Discuss the nature of the locus of corresponding points on a pencil of non-intersecting lines, showing specially that the locus is concave to the common perpendicular.

9. Establish the Cartesian formula for rectification and quadrature in *Hyperbolic* geometry.

If  $a$  is the chord of an arc  $a$  of a horocycle, prove that

$$a = 2k \sinh \frac{1}{2} \frac{a}{k}.$$

Show that the area included between an arc of an equidistant curve of distance  $a$ , its axis and two ordinates at distance  $x$  is  $kx \sinh \frac{a}{k}$ .

10. Discuss the nature of the absolute in *Parabolic*, *Hyperbolic*, and *Elliptic* geometry.

Prove that in *Elliptic* geometry the angle  $\phi$  between two lines  $(\xi_1, \eta_1, \zeta_1)$  and  $(\xi_2, \eta_2, \zeta_2)$  is given by

$$\cos \phi = - \frac{(\xi_1 \xi_2)}{\sqrt{(\xi_1 \xi_1)(\xi_2 \xi_2)}},$$

where  $(\xi\xi) = 0$  is the line equation of the absolute.

## EIGHTH PAPER

### (Non-Euclidean Geometry—Second Paper)

Examiners—  $\left\{ \begin{array}{l} \text{DR. S. M. GANGULI, D.Sc.} \\ \text{MR. R. C. BASU, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Attempt six questions only.*

1. Show that the equations of a plane, passing through the points  $(a, b, c, d)$ ,  $(a', b', c', d')$ ,  $(a'', b'', c'', d'')$  can be parametrically expressed in the form

$$\begin{aligned} x &= a + \lambda(a' - a) + \mu(a'' - a) \\ y &= b + \lambda(b' - b) + \mu(b'' - b) \\ z &= c + \lambda(c' - c) + \mu(c'' - c) \\ w &= d + \lambda(d' - d) + \mu(d'' - d). \end{aligned}$$

Hence or otherwise show that the plane passing through the origin and the points  $(1, 1, 1, 1)$  and  $(2, 2, 2, 3)$  is intersected by the straight line

$$\frac{x-1}{2} = \frac{y-3}{1} = \frac{z+5}{5} = \frac{w+1}{4}.$$

in a point, whose co-ordinates you are required to determine.

2. Prove that the projection of a plane on a hyperplane is in general a plane. Note the exceptional case.

A plane intersects a hyperplane, but does not lie in it, and is not perpendicular to it. Show that the plane of the hyperplane, which passes through the intersection and is perpendicular to the projection, is perpendicular to the given plane.

3. Define critical angles between two planes meeting at a point in the fourfold. If  $\theta$  is the angle which a straight line in the plane  $L_1OL_2$  makes with a straight line in the plane  $L_3OL_4$ , show that the critical values of  $\theta$  are determined by the equation

$$\begin{vmatrix} \cos \theta & (l_1l_2) \cos \theta & (l_1l_3) & (l_1l_4) \\ (l_2l_1) \cos \theta & \cos \theta & (l_2l_3) & (l_2l_4) \\ (l_3l_1) & (l_3l_2) & \cos \theta & (l_3l_4) \cos \theta \\ (l_4l_1) & (l_4l_2) & (l_4l_3) \cos \theta & \cos \theta \end{vmatrix} = 0$$

where  $(l_i l_j)$  denotes the cosine of the angle between the lines  $OL_i$  and  $OL_j$  ( $i, j = 1, 2, 3, 4$ ).

4. If two lines in one plane  $\alpha$  make equal angles with another plane  $\beta$ , the line bisecting the angle between them and the angle between their projections on  $\beta$  will determine a common perpendicular plane of  $\alpha$  and  $\beta$ .

Hence deduce that if more than two lines of one plane make equal angles with another plane, the two planes are isocline.

5. Define *orientation-cosines* of a plane in the fourfold, and deduce the conditions for (i) simple perpendicularity, (ii) absolute perpendicularity, of two planes, in terms of their orientation cosines.

Hence or otherwise deduce that a plane intersecting in a line, each of two absolutely perpendicular planes, is simply perpendicular to both.

6. Explain, with the help of an orthogonal frame, how there are two senses in which a plane may be isocline to another given plane.

If two planes  $\beta$  and  $\gamma$  are isocline in opposite senses to a plane  $\alpha$ , show that  $\alpha, \beta, \gamma$  possess one and only one pair of common perpendicular planes, perpendicular to all three. When the angles of isoclinism are equal, show that  $\beta$  and  $\gamma$  intersect in a line.

7. When are two operations said to be commutative? Prove that the rotations round two absolutely perpendicular planes are commutative.

Can you recognize the axis planes and the angles of rotation, of the double rotation given by the following transformation scheme:—

$$x' = \frac{1}{\sqrt{2}}x + \frac{1}{\sqrt{2}}z$$

$$y' = \frac{\sqrt{3}}{2}y + \frac{1}{2}w$$

$$z' = -\frac{1}{\sqrt{2}}x + \frac{1}{\sqrt{2}}z$$

$$w' = -\frac{1}{2}y + \frac{\sqrt{3}}{2}w.$$

8. When are two planes said to be parallel to one another? If two planes have a point in common, show that parallel planes through any other point will make the same angles.

Prove that the planes,

$$z = 1 + x + 2y, \quad w = 3x - y;$$

and

$$z = x + 2y, \quad w = 2 + 3x - y$$

are parallel to one another, and determine the equation of the hyperplane in which they lie.

9. Show that five hypercones can be drawn through the intersection of two quadric varieties in four space, and that the vertices of these five hypercones form a self-polar simplex with respect to any quadratic variety passing through the intersection.

10. Obtain the boundary content of the hypersphere

$$x^2 + w^2 = r^2.$$

If the plane  $x = k$  divides the hypersphere into two portions whose boundary contents are in the ratio 2 : 1 prove that

$$\pi r^2 + 3k\sqrt{r^2 - k^2} = 3r^2 \cos^{-1} \frac{k}{r}.$$

11. Write a short note on the principal lines associated with a skew curve in four space, and define the *curvature*, *torsion*, and *tilt* at any point of such a curve.

12. What are the five species of regular Polyhedroids in a fourfold?

Assuming a suitable rectangular frame of reference, determine the co-ordinates of the centroid of a regular pentahedroid.

## SEVENTH PAPER

### (Quaternions and Vector Analysis—First Paper)

$$\text{Examiners—} \begin{cases} \text{DR. H. D. BAGCHI, M.A., PH.D.} \\ \text{MR. H. N. RAY, M.A., B.L.} \end{cases}$$

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. (a) Establish the formulæ:—

$$(i) \quad \rho Sa\beta\gamma = aS\beta\gamma\rho + \beta S\gamma a\rho + \gamma Sa\beta\rho,$$

$$(ii) \quad \rho Sa\beta\gamma = V\beta\gamma Sa\rho + V\gamma aS\beta\rho + V a\beta S\gamma\rho,$$

where  $a, \beta, \gamma$  are any three non-coplanar vectors, and  $\rho$  is any fourth vector.

(b) Apply (i) or proceed otherwise to eliminate the scalars  $t$  and  $w$  from each of the vector equations:—

$$(i) \quad \rho = a + \beta t + \gamma u + \delta t u,$$

$$(ii) \quad \rho = at^2 + \beta t u + \gamma u^2.$$

2. (a) Prove that the scalar equation of a sphere can be put in each of the forms:—

$$\begin{aligned}\rho^2 - 2S\lambda\rho + l &= 0, \\ T(w + \rho - a) &= 1,\end{aligned}$$

where  $\lambda$  and  $a$  are vector constants, and  $l$  and  $w$  are scalar constants.

(b) Show that the sphere, which goes through the origin  $O$  and through the terminals of  $\alpha, \beta, \gamma$  (supposed drawn from  $O$ ), is given by

$$\rho^2 S\alpha\beta\gamma = \alpha^2 S\beta\gamma\rho + \beta^2 S\gamma\alpha\rho + \gamma^2 S\alpha\beta\rho.$$

Deduce or find directly the equation of the sphere, passing through the end-points of  $\alpha, \beta, \gamma, \delta$  (all drawn from  $O$ ).

3. (a) State (without proof) some of the more important properties of a linear vector function, and show that, in general, the three vector equations

$$\begin{aligned}\phi\alpha &= \alpha', \\ \phi\beta &= \beta', \\ \phi\gamma &= \gamma',\end{aligned}$$

determine but one linear vector function  $\phi\rho$ , viz.

$$\phi\rho \equiv \frac{\alpha' S\beta\gamma\rho + \beta' S\gamma\alpha\rho + \gamma' S\alpha\beta\rho}{S\alpha\beta\gamma}.$$

(b) Hence or otherwise devise a method of finding the six scalars  $(t_1, t_2, \dots, t_6)$ , which satisfy the two vector relations:

$$\left. \begin{aligned}t_1\tau_1 + t_2\tau_2 + \dots + t_6\tau_6 &= \lambda, \\ t_1\sigma_1 + t_2\sigma_2 + \dots + t_6\sigma_6 &= \mu,\end{aligned} \right\}$$

it being understood that  $(\tau_1, \sigma_1), (\tau_2, \sigma_2), \dots, (\tau_6, \sigma_6)$  and  $(\lambda, \mu)$  are known vectors.

4. (a) Show that every quadric surface, having the origin for centre, can be written in the form:

$$S\rho\phi\rho = -1,$$

(where  $\phi\rho$  is a certain self-conjugate function), and that the three axes are given by the vector equation:

$$V\rho\phi\rho = 0.$$

and that the three principal planes are given by the scalar equation:

$$S\rho\phi\rho\phi^2\rho = 0$$

(b) If  $m$  and  $n$  be two unequal positive integers, prove that the conicoids

$$\begin{aligned}S\rho\phi^m\rho &= -1 \\ \text{and} \quad S\rho\phi^n\rho &= -1\end{aligned}$$

are co-axial. Also compare the lengths of their principal axes.

5. (a) Establish the vector analogues of Frenet-Serret formulae :

$$\frac{d\alpha}{ds} = \frac{\beta}{r}, \quad \frac{d\beta}{ds} = \frac{\gamma}{r'} - \frac{\alpha}{r}, \quad \frac{d\gamma}{ds} = -\frac{\beta}{r'},$$

where  $\alpha, \beta, \gamma$  are the unit vectors located along the tangent, principal normal and binormal, and  $r, r'$  are the (scalar) radii of curvature and of torsion at an arbitrary point 's' on a curve, whose equation expressed in terms of the arcual parameter  $s$  is

$$\rho = \phi(s),$$

(b) If the relation

$$S\alpha\rho = 0$$

holds at all points on a curve, prove that it must lie on a sphere, whose centre is the origin.

6. (a) If  $\alpha_0, \alpha_1, \alpha_2, \dots, \alpha_n$  be vector constants and  $a_0, a_1, a_2, \dots, a_n$  be scalar constants and  $t$  be a variable scalar parameter, prove that the parametric equation

$$\rho = \frac{\alpha_0 t^n + \alpha_1 t^{n-1} + \alpha_2 t^{n-2} + \dots + \alpha_n}{a_0 t^n + a_1 t^{n-1} + a_2 t^{n-2} + \dots + a_n}$$

defines a unicursal curve (of the  $n$ th degree), whose points at infinity are given by the scalar equation

$$a_0 t^n + a_1 t^{n-1} + a_2 t^{n-2} + \dots + a_n = 0.$$

(b) Verify that the three equations

$$\rho = \frac{at^2 + \beta t + \gamma}{t^2 + 1}, \quad \rho = \frac{at^2 + \beta t + 9\gamma}{4t^2 + 12t + 9}$$

and

$$\rho = \frac{at^2 + \beta t - \gamma}{t^2 - 1}$$

represent respectively an ellipse, a parabola, and a hyperbola. Is there any point lying upon all the three conics? If so, find its positional vector.

7. (a) For a central quadric

$$S\rho\phi\rho = -1, \quad (\phi\rho \text{ is self-conjugate}),$$

prove that there can be found an infinitude of triads of conjugate semi-diameters, and that if  $(\alpha, \beta, \gamma)$  be any such triad the undermentioned relations must hold :—

$$S\alpha\phi\alpha = S\beta\phi\beta = S\gamma\phi\gamma = -1,$$

$$S\beta\phi\gamma = S\gamma\phi\alpha = S\alpha\phi\beta = 0.$$

(b) Derive also the subsidiary relation :

$$(Ta)^2 + (T\beta)^2 + (T\gamma)^2 = \frac{m'}{m},$$

(where  $m'$  and  $m$  are the second and third invariants of  $\phi\rho$ ). Deduce or prove otherwise that

$$Ta + T\beta + T\gamma$$

will be a maximum, when  $T\alpha = T\beta = T\gamma$ .

8. Two similar and similarly situated ellipsoids are cut by a series of ellipsoids similar and similarly situated to the two given ones, and in such a manner that the planes of intersection are at right angles to one another. Show that the centres of the cutting ellipsoids lie on another ellipsoid.

9. Find the equation of the straight line which meets, at right angles, two given straight lines.

10. A ray of light falls on a thin reflecting cylinder ; show that it is spread over a right cone.

### EIGHTH PAPER

#### (Quaternions and Vector Analysis—Second Paper)

Examiners—  $\left\{ \begin{array}{l} \text{MR. S. C. GHOSH, M.A.} \\ \text{,, D. P. BHATTACHARYYA, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Attempt six questions only.*

1. Investigate Hamilton's solution of the linear vector equation

$$\sigma = \phi \rho$$

and apply your method to solve the equation

$$\sigma = V\alpha \, V\beta \rho.$$

Prove that the equation

$$\rho = (\phi + t)^{-1} \alpha,$$

where  $\alpha$  is a fixed vector and  $t$  a variable scalar, represents a twisted cubic.

2. Show that for the quadric surface

$$S\rho\phi\rho = -1,$$

the equation of the diametral plane bisecting chords parallel to  $\lambda$  is

$$S\rho\phi\lambda = 0.$$

The radii  $\alpha, \beta, \gamma$  being mutually conjugate, prove that

$$\phi\alpha = -\frac{V\beta\gamma}{S\alpha\beta\gamma},$$

with similar expressions for  $\phi\beta$  and  $\phi\gamma$ .

Hence, or otherwise, show that the sum of the squares of three mutually conjugate radii is constant.

3. A particle is attracted to a centre with a force varying as the distance from the centre and moves in a medium of which the resistance

varies as the velocity. Prove that the equation of motion of the particle may be written in the form

$$\ddot{\rho} + 2b\dot{\rho} + c\rho = 0.$$

Solve this equation, and discuss the general character of the motion.

4. Prove that

$$\nabla^2 P Q = \nabla^2 P \cdot Q + 2S \nabla P \nabla Q + \nabla^2 Q \cdot P.$$

If  $P(\rho)$  is a homogeneous function of  $\rho$  of order  $n$  which vanishes under the operation of  $\nabla^2$ , show that the function

$$T\rho^{-2n-1}.P(\rho)$$

will vanish under the same operator.

5. If a scalar function  $P$  of a scalar function  $u$  of  $\rho$  can be found to satisfy  $\nabla^2 P = 0$ , show that

$$(\nabla u)^2 \cdot \frac{\partial^2 P}{\partial u^2} + \nabla^2 u \cdot \frac{\partial P}{\partial u} = 0.$$

If two different bodies have the same equipotential surfaces throughout any empty space, prove that their potentials throughout that space are connected by a linear relation.

6. Prove that the necessary and sufficient conditions that the function  $\phi$  should represent a uniform dilatation and a dilatation accompanying a shear are respectively.

$$\begin{aligned}\phi - g &= 0 \\ (\phi - g)^2 &= 0.\end{aligned}$$

7. Write down the vector polar equation to a plane curve, and supposing a particle to be moving in that curve, obtain the usual polar expressions for the velocity and acceleration of the particle along the radius vector and perpendicular to the radius vector.

Obtain expressions for the vector curvatures of a central orbit and its hodograph. Show that the law of nature is the only law for which the hodograph is a circle for all initial conditions.

8. Define 'Pure Strain'.

Show that any strain, followed by its conjugate, gives a pure strain which is the square of the pure part of either.

9. (a) When there are a number of particles forming a system, free or connected in any way, obtain the vector position of the centre of mass of the system.

(b) Show that the moment of the applied forces about the centre of mass is equal to the rate of change of the moment of momentum of the system about the same centre.

10. Prove that when vectors ( $\alpha$ ) are drawn from a fixed origin to the points of application of forces ( $\beta$ ), the equations of equilibrium are

$$\begin{aligned}\Sigma \beta &= 0 \\ \text{and} \quad \Sigma V \alpha \beta &= 0.\end{aligned}$$

Find the locus of intersection of screws of the three-system  $\mu = \phi \lambda$  whose axes are coplanar with the origin.

## MIXED MATHEMATICS

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—MR. S. GUPTA, M.Sc.*

*Attempt THREE questions only.*

1. State what assumptions are made in the approximate treatment of a beam slightly bent in a plane by transverse forces.

A uniform beam  $AB$ , of weight  $W$  and length  $l$ , is built in firmly at  $A$  so as to be horizontal, and the other end  $B$  rests on a support in the same horizontal line as  $A$ . Show that the beam rests in the form of the curve whose equation is

$$Ely = \frac{1}{48} Wl^{-1} x^2 (l - x)(3l - 2x),$$

the origin being at the end  $A$ ,  $x$ -axis horizontally towards the right and  $y$ -axis vertically downwards, and where  $E, I$  have their usual significance. Show that the bending moment and the shearing stress at  $A$  are

$\frac{Wl}{8}$  and  $\frac{5W}{8}$  respectively ; prove that the points of zero and maximum bending

moment are at distances  $\frac{l}{4}$  and  $\frac{5l}{8}$  from  $A$ , and find the magnitude of this maximum bending moment. Show also that the greatest sag of the beam is given by  $x = 0.785l$ .

2. A system of forces is equivalent to forces  $X, Y, Z$  along three perpendicular lines meeting in a point, and couples of moments  $L, M, N$  about these lines. Find the equations of the central axis, the pitch of the equivalent wrench and the six co-ordinates of the central axis. Deduce the analytical condition that the system may reduce to a single force.

Three forces  $X, Y, Z$ , parallel to rectangular axes  $Ox, Oy, Oz$ , act respectively at the points where the line

$$\frac{x-f}{l} = \frac{y-g}{m} = \frac{z-h}{n}$$

meets the co-ordinate planes  $yOz, zOx, xOy$ . Prove that the forces are equivalent to a single force if

$$l^2(ng - mh)YZ + m^2(lh - nf)ZX + n^2(mf - lg)XY = 0.$$

3. Establish the equations of equilibrium of an *elastic string*, stretched over a smooth surface and is acted upon by any forces. Examine in particular the case in which there is no continuously applied external force.

A heavy elastic string, which is uniform when unstretched, is placed along a transverse section of a smooth circular cylinder whose axis is horizontal and is just not in contact with the lowest point of the cylinder ; if  $T$  be the tension at a point the radius to which is inclined at an angle to the vertical, prove that

$$(T + \lambda)^2 = A \cos \theta + B,$$



where  $\lambda$  is the modulus of elasticity and  $A$  and  $B$  are constants depending on the weight of the string, the modulus of elasticity and the radius of the cylinder.

If  $w'$  be equal to the weight of a length of unstretched string equal in length to the radius of the cylinder and if it be also equal to the modulus of elasticity, show that the tension  $T_1$  at the highest point is given by

$$T_1 + \frac{T_1^2}{2w'} = \frac{9 + \sqrt{5}}{4} w'.$$

4. A system of bodies, acted on by a conservative system of forces and subject to smooth constraints, is in equilibrium; prove that the potential energy is stationary, and investigate the condition that the equilibrium may be stable.

A right circular cone rests with its curved surface in contact with two smooth equal cylinders whose axes are parallel, in the same horizontal plane, and distant  $d$  apart, and whose cross sections are circles of radii  $a$ . Show that the cone can rest in equilibrium with its axis in a plane perpendicular to the axes of the cylinders and inclined at an angle to the vertical given by

$$4d \cos \theta = 3r \cos^2 \alpha + 4a \cos \alpha,$$

where  $2\alpha$  is the vertical angle of the cone and  $r$  is the radius of its base; and determine whether the position is one of stable equilibrium for a small displacement in a plane perpendicular to the axes of the cylinders.

5. (i) A long thin rod  $AB$  is set up vertically and loaded with a weight  $W$  at  $B$ , the lower end  $A$  being compelled to remain vertical. If the rod be slightly elastic and be of length  $l$ , show that it does not bend if

$$W < \frac{\pi^2 EI}{4l^2},$$

where  $E$ ,  $I$  have their usual significance. When this inequality becomes an equality show that the equation of the curve the rod assumes is

$$y = y_1 \left[ 1 - \cos \frac{\pi x}{2l} \right],$$

where  $A$  is the origin and  $y_1$  is the horizontal displacement of  $B$ .

(ii) A uniform stiff wire, of weight  $\pi w a$  and flexural rigidity  $K$ , whose natural shape is a semi-circle of radius  $a$ , is placed in a vertical plane with its ends on a smooth horizontal plane. Show that the intrinsic equation to the form assumed by the wire is approximately

$$s = a\phi + wa^4 K^{-1} \left\{ \frac{1}{2} \pi \phi + \phi \cos \phi - 2 \sin \phi \right\},$$

where  $s$  being measured from the highest point, and it is assumed that  $\frac{wa^2}{K}$  is very small.

## SECOND HALF

*Examiners—MR. B. B. SEN, M.Sc.**Attempt THREE questions only.*

1. Show analytically that at any point inside a body having continuous distribution of matter, the partial derivative  $\frac{\partial V}{\partial x}$  of the potential function

$$V \left( = \int \frac{dm}{r} \right)$$

exists and is equal to the component parallel to the axis of  $x$  of the attraction at the point.

Prove that the attraction of a uniform elliptic disc at the focus is

$$\frac{2\pi m}{e} \left[ 1 - \sqrt{1 - e^2} \right],$$

$m$  being the mass per unit of area and  $e$  the eccentricity of the ellipse.

2. Define a 'Line of force'. Show that the lines of forces for a thin rod consist of hyperbolas whose foci are the ends of the rod.

Prove that the system of surfaces  $f(x, y, z, \lambda) = 0$  will be equipotential surfaces for different values of  $\lambda$ , if

$$\left[ \left( \frac{\partial \lambda}{\partial x} \right)^2 + \left( \frac{\partial \lambda}{\partial y} \right)^2 + \left( \frac{\partial \lambda}{\partial z} \right)^2 \right] = \frac{\nabla^2 \lambda}{\lambda}$$

is a function of  $\lambda$  only.

3. Find the laws of force for which the attraction of every thin uniform spherical shell at an external point is the same as that of a particle of equal mass placed at the centre.

If two finite bodies have the same external level surfaces and have equal masses, show that their attractions at all external points are the same in magnitude and direction.

4. Deduce the expression for the potential of a thick homogeneous homocoid at an internal point.

A thin prolate spheroidal shell formed by the revolution of an ellipse having major axis equal to  $2a$  and minor axis equal to  $2b$ , is divided into two portions by a diametral plane perpendicular to the axis of revolution. Show that the pressure per unit of length on the line of separation due to the mutual attraction of the parts is

$$\frac{M^2}{8\pi b} \cdot \frac{\log a - \log b}{a^2 - b^2},$$

where  $M$  is the mass of the shell.

5. If  $V_i$  be the potential just inside a surface  $S$  and  $V_e$  the potential just outside it, show that the surface density  $\sigma$  of the stratum on  $S$  is given by the relation

$$4\pi\sigma = \left[ \frac{\partial V_i}{\partial n_e} + \frac{\partial V_e}{\partial n_i} \right],$$

where  $dn_i$  and  $dn_e$  are the elements of inward and outward drawn normals respectively.

The values of  $V$  at any point at a distance  $r$  from the origin are—

$$V = 2\pi\rho(a^2 - b^2), \text{ if } r < b < a;$$

$$V = 2\pi\rho \left[ a^2 - \frac{r^2}{3} - \frac{2b^3}{3r} \right], \text{ if } b < r < a;$$

$$\text{and } V = \frac{4\pi\rho}{3} \cdot \frac{a^3 - b^3}{r}, \text{ if } b < a < r.$$

Find the attracting system.

## SECOND PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner—DR. D. D. KOSAMBI*

*Only THREE questions are to be attempted.*

1. On a fixed straight line in the plane, two points  $O_1, O_2$  are marked, and the general point of the plane is determined by two sets of polar co-ordinates  $r_1, \theta_1$  and  $r_2, \theta_2$  with  $O_1, O_2$  as poles. Find the equations of motion of a free particle in the plane for each possible pair of the four co-ordinates.

2. (a) Particles are thrown off the rim of a wheel which moves without slipping along a horizontal plane, with constant forward velocity. Assuming the air to have no effect on the particles, find the particle that rises to the highest level above the ground, and the envelope (if any exist) of all the particles thrown off at a given instant.

(b) While firing on a horizontal range in vacuo, the gun scatters through a small angle  $\delta\alpha$  in all directions from its intended line of fire. Show that the shots scatter over an elliptical area, and find the area for a given range and initial velocity.

3. Discuss the motion of a particle under the force of gravity and a resistance of the air which is proportional to some power of the velocity; when, in particular, is there a limiting velocity?

A ray of light traverses a medium with a variable velocity  $\phi(x, y)$  which is the same for all directions at any point. If it move from one

point to another in the least possible time, show that its path must be a solution of the differential equation

$$\frac{\phi y''}{1+y'^2} - \phi x' + \phi y = 0.$$

4. Show that except for a circle about its centre as centre of attraction, and a straight line passing through the centre of attraction, the law of force in a plane central orbit may always be determined. Discuss the exceptions.

Show that the necessary force on a right circular cone, directed to the vertex of the cone, is  $\frac{A}{r^3} - \frac{B}{r^3}$ , in order that the path on the cone be a plane section.

5. Discuss the motion of the spherical pendulum, showing in particular that for small oscillations about equilibrium, the horizontal projection of the bob traces an ellipse with rotating axes. Find the angular velocity of the rotation.

## SECOND HALF

*Examiner*—MR. H. C. SENGUPTA, M.A.

N.B.—Only THREE questions are to be attempted.

1. Find the surfaces of equal pressure for homogeneous fluid acted upon by two forces which vary as the inverse square of the distance from two fixed points. Prove that if the surface of no pressure be a sphere, the loci of points at which the pressure varies inversely as the distance from one of the centres of force are also spheres.

2. A vessel full of water is in the form of an eighth part of an ellipsoid (semi-axes  $a, b, c$ ), bounded by the three principal planes. The pressure of the atmosphere is neglected and the axis- $c$  is vertical. Prove that the resultant pressure on the curved surface is a single force.

3. A body floats partly immersed in a heterogeneous liquid. Find analytically the conditions that it may have a metacentre. Find the condition of stability when the metacentre exists.

4. Shew that a catenoid is the only possible form of revolution of a film when the pressure is the same on both sides.

5. A case in the form of a prolate spheroid of small ellipticity  $\epsilon$  is filled by a fluid nucleus of density  $\rho + \sigma$  surrounded by a fluid of density  $\rho$ . Shew that, if it rotates round its axis of figure with angular velocity  $(\frac{8}{3}\pi\rho\epsilon)^{\frac{1}{2}}$ , a possible form of the common surface is a sphere.

## THIRD PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—MR. K. KHASTGIR, M.Sc.*

*Attempt ANY THREE questions.*

1. Find the condition that a given straight line may be a principal axis of a given material system, at any point of its length and if so, find the other two principal axes.

A homogeneous right circular cone has mass  $M$ , altitude  $a$ , and radius of base  $b$ . Find its moment of inertia about a slant side and about a perpendicular to the axis through the centroid.

2. A cord is wound round a vertical wheel with fixed horizontal axis and a mass  $m$  is hung at its free end. The system is then left to itself. Find the kinetic energy of the system after time  $t$  from the beginning of the motion and the angular velocity at that time, neglecting the mass of the cord and friction at the axle.

Find the motion of a homogeneous sphere of radius  $a$  rolling on a perfectly rough inclined plane of angle  $\alpha$ , supposing that the sphere is rotating initially with angular velocity  $\Omega$  about a line of greatest slope. Prove that at time  $t$ , the inclination of the instantaneous axis of rotation to a line of greatest slope is  $\tan^{-1}(5gt \sin \alpha / 7a\Omega)$ .

3. Discuss the motion of a body free to move about an axis and acted on by impulsive forces.

Determine the condition that there shall be a centre of percussion and determine its position.

Three uniform rods  $AB$ ,  $BC$ ,  $CD$  identical in all respects, are freely jointed at  $B$  and  $C$ . They are then laid out in the same straight line on a smooth horizontal table, and a horizontal impulse  $P$  is applied at the centre of the middle rod  $BC$  in a direction at right angles to its length. Find the instantaneous impulse on each of the other beams.

4. Obtain the equations of motion of a rigid body whose mass is not constant.

A homogeneous rotating sphere contracts, under the influence of cooling, in such a way as to remain homogeneous. Examine the effect produced on the angular velocity of the sphere. Taking the period of rotation to be 24 hours when the radius is 4,000 miles, prove that the diminution of radius necessary to produce a change of one second in the period is approximately 122 feet.

5. A uniform sphere, rotating with angular velocity  $\omega$  about an axis perpendicular to the plane of motion of its centre, impinges on a rough horizontal plane. Find the resulting change in its motion.

A perfectly rough ball is placed within a hollow cylindrical garden roller at its lowest point with a uniform velocity  $v$ . Show that the ball will roll quite round the interior of the roller, if  $v^2 > \frac{2}{7}g(b-a)$ ,  $a$  being the radius of the ball and  $b$  that of the roller.

## SECOND HALF

Examiner—MR. B. C. DAS, M.Sc.

Answer ANY THREE questions

6. A rigid body is moving freely in any manner in space ; show that, at any instant, its motion is given by an angular velocity about a unique axis in space, together with a linear velocity along it.

Taking this axis as the axis of  $z$ , show analytically how the same motion may be represented as the resultant of two simultaneous angular velocities about two lines, one of which has its equations given. Shew also in this case that if the given line is at right angles to the central axis (axis of  $z$ ), the other meets it, and conversely.

7. Prove that in case of impact of inelastic bodies, vis viva of the system is lost, and in case of an explosion, vis viva is gained.

Two particles of masses  $m, m'$  are connected by an inelastic string of length  $a$ . The former is placed in a smooth straight groove, and the latter is projected in a direction perpendicular to the groove with a velocity  $V$ . Prove that the particle  $m$  will oscillate through a space

$$\frac{2am'}{m+m'},$$

and that if  $m$  be large compared with  $m'$ , the time of oscillation is nearly

$$\frac{2\pi a}{V} \left( 1 - \frac{m'}{4m} \right).$$

8. A homogeneous sphere moves without rotation on a smooth horizontal plane under the action of a central force such that the centre of the sphere describes an ellipse with the centre of force in the focus. If the sphere arrive at a part of the plane which is perfectly rough when the distance of its centre from the centre of force is one-third of the major axis of its orbit, show that the major axis is diminished in the ratio 7 : 11. If the sphere come again to the smooth part of the plane when the distance of its centre from the focus is the same fraction as before of the major axis, the major axis is again diminished in the same ratio.

9. Discuss briefly the use of the method of indeterminate multipliers in connection with Lagrangian equations of motion.

A heavy rod whose length is  $2a$ , slips down with its extremities in contact with a smooth horizontal floor and a smooth vertical wall, the rod not being initially in a plane perpendicular to the wall. If  $\theta$  be the inclination of the rod to the vertical, and  $\psi$  the inclination of the horizontal projection of the rod to the intersection of the planes, prove that

$$4 \frac{d^2}{dt^2} (\cos \theta) - \cot \theta \sec \psi \frac{d^2}{dt^2} (\sin \theta \cos \psi) = \frac{3g}{a},$$

$$4 \frac{d^2}{dt^2} (\sin \theta \sin \psi) = \tan \psi \frac{d^2}{dt^2} (\sin \theta \cos \psi).$$

10. A uniform rough heavy circular disc of radius ' $a$ ' has its edge touching a horizontal table and rests against a pointed top of a peg of vertical height  $h$  fixed in the table. In the position of equilibrium its plane makes an angle  $\alpha$  with the table. Show that the length of the simple equivalent pendulum for a small oscillation in which there is no slipping is

$$ah \sec \alpha \tan \alpha / 4(h - a \sin \alpha).$$

## FOURTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—PROF. N. M. BOSE, D.Sc.*

*Attempt ANY THREE questions.*

1. If

$$F(x) = \int_a^x f(t) dt,$$

prove that  $F(x)$  is a continuous function of  $x$  and that it has a differential coefficient equal to  $f(x)$  at all points where  $f(x)$  is continuous.

Show that if  $f(x)$  be a continuous function such that

$$\int_{x_1}^{x_2} f(x) dx = 0$$

for every pair of numbers  $(x_1, x_2)$ , then  $f(x)$  is identically equal to zero. Construct a simple example to show that the above conclusion is not valid if  $f(x)$  be not continuous.

2. State the *second mean value theorem* of the Integral Calculus and apply it to establish the convergence of

$$\int_1^x \frac{\log x}{\sqrt{x}} \sin x \, dx$$

If  $f(x)$  be a positive, continuous and increasing function of  $x$ , find the value of

$$\lim_{n \rightarrow \infty} \int_0^a f(x) \frac{\sin nx}{\sin x} dx, \quad 0 < a < \pi.$$

3. Define the concept of uniform convergence of a series and explain its importance. Show that a power series

$$\sum_0^{\infty} a_n z^n$$

is uniformly convergent in the domain

$$|z| \leq r < R,$$

where  $R$  is the radius of convergence of the series.

Find the radius of convergence of the series

$$1 + \sum_1^{\infty} a_n e^n$$

in the following cases:—

- (i)  $a_n = n^{n^2}$ ; (ii)  $a_n = n^{-n^2}$ ;  
 (iii)  $a_n = (n!)^{\frac{1}{(\log n)^2}}$ ; (iv)  $a_n = \begin{cases} 2^{-n} & \text{if } n \text{ be odd,} \\ 3^{-n} & \text{if } n \text{ be even.} \end{cases}$

4. Show that if  $f(z)$  has a derivative at every point within the unit circle, then it has derivatives of all orders in the same domain. Also prove that for all suitably large values of  $n$ ,

$$|f^{(n)}(0)| < (1 + \epsilon)^n n!$$

where  $\epsilon$  is any previously assigned positive number.

5. If a non-constant analytic function  $f(z)$  be equal to  $a$  at  $z = z_0$ , show that there is a positive number  $\delta$  such that  $f(z) \neq a$  for any  $z$  for which  $0 < |z - z_0| < \delta$ .

Prove that if an integral function is not identically equal to zero, then the number of its zeros in any finite domain is not infinite. Give an example of a non-constant analytic function which has an infinite number of zeros in a finite domain and state what it implies.

6. Explain the factors contributing to the successful evaluation of certain definite integrals by the method of contour integration. Illustrate your answer by evaluating

$$(i) \int_0^x \frac{\cos mx}{1+x^2} dx;$$

$$(ii) \int_0^x \cos x^2 dx.$$

## SECOND HALF

Examiner—PROF. N. R. SEN, PH.D., D.Sc.

Not more than THREE questions to be attempted.

1. Prove that a fundamental system of solutions in the neighbourhood of a singular point  $a$  of the differential equation

$$\frac{d^2 w}{dz^2} + p(z) \frac{dw}{dz} + q(z)w = 0$$

admits of expansions of the form

$$w_1 = (z-a)^{r_1} \sum_{n=0}^{\infty} a_n (z-a)^n$$

$$w_2 = (z-a)^{r_2} \sum_{n=0}^{\infty} b_n (z-a)^n$$

$$(z-a)^{r_1} \left\{ A \log(z-a) \sum_{n=0}^{\infty} a_n (z-a)^n + \sum_{n=0}^{\infty} b_n (z-a)^n \right\}$$



Obtain from this the forms of  $p(z)$  and  $q(z)$  in the neighbourhood of  $a$  if this point is to be a non-essential singularity.

2. Obtain the integrals of the equation

$$z^2(1+z) \frac{d^2w}{dz^2} - (1+2z) \left( z \frac{dw}{dz} - w \right) = 0$$

in the neighbourhood of the origin.

Prove that the integral curve of the differential equation

$$x \frac{d^2y}{dx^2} + (x+1) \frac{dy}{dx} + 2y = 0$$

which cuts the  $y$ -axis at unit distance from the origin and has there a slope given by  $(dy/dx) = -2$ , can be represented up to the fifth order by

$$y = 1 - 2x + \frac{3}{2!} x^2 - \frac{4}{3!} x^3 + \frac{5}{4!} x^4 - \frac{6}{5!} x^5 + \dots$$

3. Discuss the nature of the singularities of the hypergeometric equation

$$z(1-z) \frac{d^2w}{dz^2} + \left\{ \gamma - (\alpha + \beta + 1)z \right\} \frac{dw}{dz} - \alpha\beta z = 0.$$

Assuming  $F(\alpha, \beta, \gamma; z)$  to be an integral in the neighbourhood of the origin, show that

$$1 - \gamma(1-z)^{\gamma-\alpha-\beta} F(1-\alpha, 1-\beta, 2-\gamma; z)$$

and

$$(1-z)^{\alpha} F(\alpha, \gamma-\beta, \alpha-\beta+1; 1-z)$$

are also solutions.

Construct the linear differential equation of the second order which has every point except  $a, b, c$  as ordinary point, the exponents at these points being  $\alpha, \alpha'$ ;  $\beta, \beta'$ ; and  $\gamma, \gamma'$  respectively.

4. When  $n$  is integral show that the Bessel Function of  $n$ th order can be represented as

$$J_n(z) = \frac{1}{\pi} \int_0^\pi \cos(z \sin \xi - n\xi) d\xi.$$

Extend this result for the case when  $n$  is real but not integral, the function implied being the solution of Bessel Equation.

Prove that

$$\frac{1}{\pi} \int_0^\pi \sin n\xi \sin(z \sin \xi) d\xi = 0 \text{ or } J_n(z)$$

according as  $n$  is even or odd.

5. Transform the wave equation

$$\nabla^2 \phi = \frac{1}{c^2} \frac{\partial^2 \phi}{\partial t^2}$$

into polar co-ordinates and then obtain a solution in these co-ordinates. Show how a progressive convergent or divergent wave can be constructed.

6. State with explanation *any* set of sufficient conditions that you know for the convergence of Fourier Series. Indicate briefly only the important steps by which the proof of your statement can be arrived at.

In the interval

$$0 < x < \frac{l}{2} \quad f(x) = x^2$$

and  $\frac{l}{2} < x < l \quad f(x) = 0.$

Express the function by means of a series of sines and also by means of a series of cosines of multiples  $\pi x/l$ . What are the sums of the series for

$$x = \frac{l}{2}?$$

## FIFTH PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner—DR. A. S. NARLIKAR*

*THREE questions to be answered.*

1. A sphere moves uniformly through a liquid at rest at infinity. Discuss the motion.

If another sphere is made to move with the same velocity so that it is always at a constant distance behind, great compared to either radius, find the force necessary to maintain the motion.

2. Obtain the velocity potential to describe the motion of a liquid inside a rotating ellipsoidal shell,

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} - 1 = 0.$$

Prove that every particle of the liquid describes an ellipse relative to the ellipsoid like a particle moving under a law of force varying as the distance from a fixed point.

A spherical shell of radius  $a$  and mass  $M$  is filled with water and rotated about a diameter with a uniform angular velocity  $\omega$ . Find the kinetic energy of the system.

3. Using the transformation  $W = A e^{-2\zeta}$  prove that, if a rigid elliptic cylinder of semi-axes  $a, b$  rotates with a uniform angular velocity  $\omega$  in an infinite

mass of liquid the stream function for cyclic irrotational motion with circulation  $k$  is

$$\psi = \frac{1}{2} \omega (a+b)^2 e^{-2\xi} \cos 2\eta + k\xi / 2\pi.$$

Hence prove that a rectilinear vortex whose cross section is an ellipse and whose spin is constant can maintain its form rotating as if it were a solid cylinder in an infinite liquid.

1. Prove from general dynamical considerations that a sphere moving in a liquid with a plane boundary is attracted towards the wall.

Find the complete system of images which will represent the motion of the sphere perpendicular to the wall.

5. If  $(u, v, 0)$  denote the components with regard to spherical polar co-ordinates  $(\gamma, \theta, \phi)$  of the velocity of a homogeneous liquid, and  $u, V$  are independent of  $\phi$ , shew that there is a stream function  $\psi$  such that

$$u = -\frac{1}{\gamma^2 \sin \theta} \frac{\partial \psi}{\partial \theta}, \quad v = -\frac{1}{\gamma \sin \theta} \frac{\partial \psi}{\partial \gamma}.$$

Find  $\psi$  if the fluid motion is due to a source of strength  $m$  at a fixed point  $A$ , a sink  $-m$  at another fixed point  $B$ , a translation of the fluid of velocity  $U$  in the direction  $AB$  being superposed. Explain how this solution can be used to deduce the motion of fluid past a certain solid of revolution.

6. Prove that a thin cylindrical vortex of strength  $\sigma$  running parallel to a plane boundary at a distance  $a$ , will travel with velocity  $\frac{\sigma}{4\pi a}$ ; and shew that a stream of fluid will flow past between the travelling vortex and the boundary of total amount

$$\frac{\sigma}{2\pi} \left\{ \log \left( \frac{2a}{c} \right) - \frac{1}{2} \right\}$$

per unit length along the vortex, where 'c' is the small radius of the cross section of the vortex.

## SECOND HALF

Examiner—DR. B. S. RAY, M.Sc., PH.D.

Answer ANY THREE questions.

7. Establish the Eulerian equations of motion. Are these equations sufficient to determine the motion of a fluid definitely?

Integrate the equations when the motion is irrotational.

Steam is rushing from a boiler through a conical pipe, the diameters of the ends of which are 'D' and 'd'; if 'V' and 'v' be the corresponding velocities of the steam, and if the motion be supposed to be that of divergence from the vertex of the cone, prove that

$$\frac{v}{V} = \frac{D^2}{d^2} e^{\frac{v^2 - V^2}{2k}},$$

where  $k$  is the pressure divided by the density, and supposed constant.

8. Explain how will you proceed to find the motion due to a two-dimensional source in the presence of a circular boundary.

A source 'S' and a sink 'T' of equal strengths 'm' are situated within the space bounded by a circle whose centre is 'O'. If 'S' and 'T' are at equal distances from 'O' on opposite sides of it and on the same diameter AOB, shew that the velocity of the liquid at any point P is

$$2m \cdot \frac{OS^2 + OA^2}{OS} - \frac{PA \cdot PB}{PS \cdot PS' \cdot PT' \cdot PT''}$$

where 'S'' and 'T'' are the inverse points of 'S' and 'T' with respect to the circle.

9. Prove that the circulation in any closed path moving with the fluid is constant for all times.

Hence or otherwise shew that if the motion of a frictionless fluid be once irrotational, it will always be so.

Shew that this theorem also holds for a fluid whose particles are acted on by a frictional resistance varying as its velocity.

10. Show that the boundary

$$P(x, y, z, t) = 0$$

of a fluid, satisfies the equation

$$\frac{\partial F}{\partial t} + u \frac{\partial F}{\partial x} + v \frac{\partial F}{\partial y} + w \frac{\partial F}{\partial z} = 0.$$

Show that

$$\frac{x^2}{a^2 k^2 t^4} + k t^2 \left\{ \left( \frac{y}{b} \right)^2 + \left( \frac{z}{c} \right)^2 \right\} = 1$$

is a possible form of the bounding surface of a liquid at any time 't'.

11. A long circular cylinder moves through an infinite liquid, which is at rest at infinity with a velocity 'u' at right angles to the axis. If the cross-section is not quite circular but has for equation

$$r = a(1 + \epsilon \cos n\theta),$$

where 'ε' is small, show that when the motion is parallel to the axis of x, the approximate value of the velocity potential is

$$ua \left\{ \frac{a}{r} \cos \theta + \epsilon \frac{a^{n+1}}{r^{n+1}} \cos (n+1) \theta - \epsilon \frac{a^{n-1}}{r^{n-1}} \cos (n-1) \theta \right\}.$$

## SIXTH PAPER

*The questions are of equal value.*

*Only THREE questions are to be attempted from EACH half.*

## FIRST HALF

*Examiner.* DR. H. K. SARKAR, D.Sc.

1. Account for the unequal lengths of the day, except at the equinoxes, at different parts of the year, at the same place and at different stations on the surface of the earth. Explain how the duration of twilight can be ascertained at a place at a specified time of the year.

Shew that at a place in latitude  $\phi$ , the shortest duration of twilight when expressed in hours is

$$1\frac{2}{3} \sin^{-1} (\sin 9^\circ \sec \phi),$$

where  $\sin^{-1} (\sin 9^\circ \sec \phi)$  is expressed in degrees.

If daylight be considered to begin and end when the sun is  $\theta$  degrees below the horizon, there are two latitudes which have the same duration of daylight so long as

$$\text{sun's declination} | < \theta \text{ degrees.}$$

2. Describe the various causes that affect the position of a star and work out in detail the part played by precession so far as it affects the right ascension and declination of a star.

Shew that all stars whose R.A. is not temporarily being changed by precession lie on a cone passing through the poles of the equator and the ecliptic.

3. Calculate the effect of annual parallax of a star on its latitude and longitude.

The annual parallax of a star causes it to describe the small ellipse which it appears to move in annually owing to aberration. Prove this.

Shew that the cosine of the angle between the directions in which a star is displaced on the celestial sphere by annual aberration and by annual parallax is

$$\sin 2(\theta - \lambda) \cos^2 \beta / [4 \sin^2 \beta + \cos^4 \beta \sin^2 2(\odot - \lambda)]^{-\frac{1}{2}}$$

where  $\beta$  is the latitude,  $\lambda$  the longitude of the star, and  $\odot$  the longitude of the sun.

4. Develop a theory of the eclipse of the moon, taking the Umbra of the earth's shadow into consideration.

In a partial lunar eclipse, the first contact with the shadow occurs at an angle  $\alpha$  from the most northerly point of the moon's limb towards the east and the last contact at an angle  $\beta$  towards the west. Prove that the proportion of moon's diameter eclipsed is

$$\frac{1}{2} \left( 1 + \frac{s}{m} \right) \{ 1 \mp \cos \frac{\alpha + \beta}{2} \}$$

where  $s$  and  $m$  are the semi-diameters of the shadow and the moon respectively, and explain the double sign.

5. Obtain an expression for the daily retardation in the hour of rising of the sun, and explain on a certain assumption (to be specified) the phenomenon of harvest moon.

Shew that in latitude  $45^\circ$ , the difference between the times from sunrise to apparent noon and from apparent noon to sunset is

$$\frac{D}{365} \tan \delta \sec \delta (\sec 2\delta)^{\frac{1}{2}} \cot \left( \frac{360^\circ T}{365} \right),$$

where  $D$ —length of the day,

$\delta$ —the sun's declination,

and  $T$ —number of days since the vernal equinox, the earth's orbit being supposed circular.

## SECOND HALF

*Examiner*—Dr. K. M. BAST, D.Sc.

6. Prove that if  $R$  be the refraction, the differential equation of refraction can be expressed in the form

$$\frac{dR}{d\mu} = \frac{1}{\mu} \cdot \frac{a\mu_0 \sin z}{\sqrt{\mu^2 r^2 - \mu_0^2 a^2 \sin^2 z}},$$

where  $\mu$  is the index of refraction at the radial distance  $r$ , and  $z$  the zenith distance at the surface (radial distance  $a$ ), the atmosphere being regarded as consisting of strata, each of uniform density, concentric with the earth.

Assuming the moon is depressed at rising by parallax through  $59'$  and elevated by refraction through  $35'$ , show that if  $h$  be the hour angle and  $\delta$  the declination we have at Greenwich (lat.  $51^\circ 28' 38''$  N)

$$\cos^2 \frac{1}{2} h - [2036] \sec \delta \cos \left( 19^\circ . 37' - \frac{1}{2} \delta \right) \\ \sin \left( 19^\circ . 27' . 7 - \frac{1}{2} \delta \right).$$

7. Show that the equation of time is

$$\frac{12}{\pi} \left\{ 2e \sin (L - \omega) - \tan^2 \frac{1}{2} \omega \sin 2L \right\}$$

hours approximately, where  $L$  is the mean longitude of the sun,  $\omega$  the longitude of the perigee,  $e$  the eccentricity of the earth's orbit, and  $\omega$  the obliquity of the ecliptic.

Show from this expression that the equation of time vanishes four times a year, and that if  $L_1, L_2, L_3, L_4$  be the mean solar longitudes of the four occasions on which the equation of time vanishes

$$\tan L_1 \tan L_2 \tan L_3 \tan L_4 = \tan^2 \omega.$$

8. If  $(r, \alpha, \delta)$  be the true distance and the R.A. and declination of a star and  $(r', \alpha', \delta')$  the apparent distance and the apparent R.A. and declination of the star as affected by geocentric parallax, prove the following equations :—

$$r' \cos \delta' \cos \alpha' = r \cos \delta \cos \alpha - \rho \cos \phi \cos \vartheta,$$

$$r' \cos \delta' \sin \alpha' = r \cos \delta \sin \alpha - \rho \cos \phi \sin \vartheta,$$

$$r' \sin \delta' = r \sin \delta - \rho \sin \phi,$$

$\rho$  being the distance of the observer from the earth's centre,  $\phi$  the latitude of the observer, and  $\vartheta$  the sidereal time.

Assuming the earth to be a sphere show that the moon's parallax in R.A. and declination is given by the following approximate formula:—

$$\pi_{\alpha}' = -\pi_0' \cos \phi \sin h \sec \delta,$$

$$\pi_{\delta}' = \pi_0' (\cos \phi \cos h \sin \delta - \sin \phi \cos \delta),$$

where  $h$  is its hour angle.

9. A star is observed through a transit instrument mounted in the meridian, and  $\lambda$  is the observed clock-time of a star's transit over the middle wire. Prove that

$$\alpha = \lambda + \Delta \lambda + k \sin (\phi - \delta) \sec \delta + b \cos (\phi - \delta) \sec \delta + c \sec \delta,$$

where  $\alpha$  is the R.A. of the star, and  $\Delta \lambda$  the clock correction and  $k, b, c$ , the constants of the instrument.

The level constant  $b$  and the collimation constant  $c$  of a transit instrument are determined, in the usual way, with a possibility of errors  $\Delta b, \Delta c$  respectively. The azimuth constant  $k$  is determined by observations of a pole star and of an equatorial star. Show that the resulting possible error in  $k$  is given by

$$\Delta k = \Delta b \tan \phi + \Delta c \sec \phi,$$

where  $\phi$  is the latitude.

10. Show that at sidereal time  $\vartheta$ , in latitude  $\phi$ , the ecliptic intersects the horizon in points  $C_1, C_2$  at a distance  $c$  from the east and west points such that

$$\cot c = \cot \omega \cos \phi \sec 15\vartheta + \sin \phi \tan 15\vartheta.$$

Show that in northern latitudes *outside* the Arctic circle the points  $C_1, C_2$  oscillate about the east and west points, and that for the point  $C_1$  the times from the most northerly to the most southerly positions and back again are in the ratio

$$\pi - \cos^{-1}(\tan \omega \tan \phi) : \cos^{-1}(\tan \omega \tan \phi).$$

Show also that *inside* the Arctic circle the points  $C_1, C_2$  travel completely round the horizon, and that the times taken by the two points in turn to travel from the north point to the south point of the horizon are in the ratio

$$\pi - \cos^{-1}(\cot \omega \cot \phi) : \cos^{-1}(\cot \omega \cot \phi).$$

**(Elasticity)****SEVENTH PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. S. GUPTA, M.Sc.**Only THREE questions are to be attempted.*

1. Show that the rotation  $(\tilde{\omega}_x, \tilde{\omega}_y, \tilde{\omega}_z)$  is a vector quantity and  $\tilde{\omega}_x^2 + \tilde{\omega}_y^2 + \tilde{\omega}_z^2$  is an invariant.

Find the expressions for cubical dilatation  $\Delta$  and the components of rotation  $\tilde{\omega}_\alpha, \tilde{\omega}_\beta, \tilde{\omega}_\gamma$  referred to orthogonal curvilinear co-ordinates. Hence deduce the corresponding expressions referred to cylindrical co-ordinates  $r, \theta, z$ .

2. Obtain the equations of equilibrium of an isotropic solid in terms of displacements and deduce Beltrami's equations

$$\frac{1}{1+\sigma} \frac{\partial^2 \Theta}{\partial x^2} - 0, \quad \nabla^2 \Gamma_z + \frac{1}{1+\sigma} \frac{\partial^2 \Theta}{\partial y \partial z} = 0$$

where  $\Theta$  is the sum of the principal stresses at any point and is an harmonic function at all points within the body.

Prove that Maxwell's stress-system cannot occur in an isotropic solid body free from the action of body forces and slightly strained from the state of no stress.

3. Shew that the general equation of equilibrium of an isotropic body, under radial body force  $R$ , is

$$(\lambda + 2\mu) \frac{\partial}{\partial r} \left( \frac{\partial u_r}{\partial r} + 2 \frac{u_r}{r} \right) + \rho R = 0,$$

where  $u_r$  is the radial displacement.

A sphere is in equilibrium under the mutual gravitation of its parts. Shew that the radial displacement  $u_r$  is of the form

$$u_r = ar + \frac{b}{r^2} + cr^3.$$

If the sphere be complete up to the centre and its surface  $r=r_0$  be free from tractions find the constants  $a, b, c$ .

4. Shew that a strain-energy function can be proved to exist only when the elastic changes are either isothermal or adiabatic. Write down the general form of the function for an isotropic body.

5. Find the equation of the stress-quadratic.

Shew that if  $X_x, Y_y, Z_z$  are the principal stresses, the traction across any plane is inversely proportional to the product of the semi-axes of the parallel central section of the ellipsoid

$$\frac{x^2}{X_x^2} + \frac{y^2}{Y_y^2} + \frac{z^2}{Z_z^2} = \text{const.}$$



## SECOND HALF

Examiner—DR. J. GHOSH, D.Sc.

Only THREE questions are to be attempted.

1. Establish the equations of equilibrium of a thin elastic rod bent and twisted under any forces.

Deduce the approximate equations for a rod bent and twisted by terminal forces and couples only. Explain the analogy of the problem with the problem of the motion of a top.

2. Explain the term *torsional rigidity* of a twisted prism. Calculate its value in the case of a prism whose cross-section is an ellipse.

3. Deduce the equation of the *elastica*, and explain the analogy with the motion of a pendulum.

Shew that a long straight rod can be bent by forces  $R$  applied at its ends in a direction parallel to that of the rod when unstressed, provided that  $l^2 R > \pi^2 B$ , where  $l$  is the length of the rod.

4. Solve the problem of flexure for a beam of rectangular cross-section.

5. In a continuous beam, shew that the equation of equilibrium may be expressed in the form  $G - B \frac{d^2 y}{dx^2}$ .

In the case of a concentrated load at a point of a beam which is supported at both ends, show that the deflexion at any point  $x$  ( $l > x > \xi$ ) is given by

$$By = \frac{1}{6} \frac{W}{l} \left\{ k(l-x) - (l-x)^3 \right\} \xi,$$

where  $k$  is a constant depending on  $l$  and  $\xi$ , and  $\xi$  is the distance of the load from the end whence  $x$  is measured.

## EIGHTH PAPER

The questions are of equal value.

## FIRST HALF

Examiner—PROF. N. R. SEN, PH.D., D.Sc.

Only THREE questions are to be attempted.

1. Prove that the displacement system satisfying the equations of equilibrium of an elastic body as well as the boundary conditions, gives a smaller value for the potential energy than any other displacement system which satisfies only the conditions at the boundary.

A uniform rod of which the cross-section is a square undergoes uniform extension in the direction of its length. Calculate the potential energy of deformation.

2. A force  $X_0$  in the direction of the  $x$ -axis is acting at the origin which is situated inside an elastic body. Shew that the corresponding displacement is given by

$$u = -\frac{(\lambda + \mu)X_0}{8\pi\mu(\lambda + 2\mu)} \frac{\partial^2 r}{\partial x^2} + \frac{X_0}{4\pi\mu r},$$

$$v = -\frac{(\lambda + \mu)X_0}{8\pi\mu(\lambda + 2\mu)} \frac{\partial^2 r}{\partial x \partial y}, \quad w = -\frac{(\lambda + \mu)X_0}{8\pi\mu(\lambda + 2\mu)} \frac{\partial^2 r}{\partial x \partial z}.$$

3. Give a short sketch of the approximate theory of bending of plates by transverse forces.

A load  $W$  is concentrated at the centre of a circular plate of radius  $a$ , clamped at the edge. Shew that the displacement is given by

$$v = \frac{W}{8\pi D} \left[ -r^2 \log \frac{a}{r} + \frac{1}{2} (a^2 - r^2) \right],$$

where

$$D = \frac{2}{3} Kh^3 / (1 - \sigma^2).$$

4. In an isotropic solid of volume  $V$ , the average value of  $\Delta$  due to surface-tractions  $X\nu, \dots$  and the body forces  $X, \dots$ , is given by

$$\overline{\Delta} = \frac{1}{3kV} \int \rho (Xx + Yy + Zz) dv + \frac{1}{3kV} \int (X\nu x + Y\nu y + Z\nu z) dS,$$

where the first integral is taken over the whole volume and the second over the surface of the solid.

Hence shew that a vessel of any form, of internal volume  $v_1$  and external volume  $v_0$ , when subjected to external pressure  $p_0$  and internal pressure  $p_1$ , will have its total volume diminished by the amount

$$\frac{(p_0 v_0 - p_1 v_1)}{k},$$

where  $k$  is bulk modulus.

5. Construct a solution of the equations of equilibrium of an elastic solid under no body forces, when the dilatation is given by the following spherical harmonic of the second order:

$$\Delta_2 = 2x^2 - y^2 - z^2.$$

Indicate how this solution can be applied to the problem of the sphere with suitably given surface displacements.

## SECOND HALF

Examiner—DR. J. GHOSH, D.Sc.

Only THREE questions are to be attempted.

1. Find the velocities of irrotational and equivoluminal waves in an elastic medium.

If plane waves of any type are propagated through the medium, shew that they travel with one or other of the above velocities.

2. Define a *wave-surface*. Shew that it is a sphere in the case of an isotropic medium.

In an aetotropic medium, prove that the wave surface in general consists of three sheets.

3. Obtain the equation of torsional vibrations of a thin uniform rod.

Find the frequency equation for a rod clamped at one end and free at the other. Calculate also its potential energy.

4. Obtain the frequency equation for the rotatory vibrations of a solid sphere, viz.,

$$\tan ka = \frac{3ka}{3 - k^2 a^2},$$

where  $\mu k^2 = \rho p^2$ .

5. Find Hoppe's frequency equation for the flexural vibrations of a thin circular ring in its own plane.

## (Theory of Tides and Water-waves)

### SEVENTH PAPER

Examiners -  $\left\{ \begin{array}{l} \text{MR. B. M. SEN, M.A., M.Sc.} \\ \text{DR. N. N. SEN, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Only six questions may be attempted.*

1. Explain clearly the fundamental assumptions of the various theories of tides, stressing the points of difference.

Prove that on the Equilibrium theory, the free surface of a liquid spherical globe is a zonal harmonic spheroid whose axis passes through the disturbing body. Explain how the motion of the disturbing body may be taken into account.

2. Investigate the tides in a uniform canal connecting at one end with the open sea where an oscillation  $\eta = a \cos \sigma t$  is maintained.

If there be two simultaneous oscillations of speeds  $\sigma, \sigma'$  verify the presence in the canal of oscillations of speeds  $\sigma + \sigma'$  and  $\sigma - \sigma'$ .

3. Explain generally the theory of tidal oscillations in an inland sea, and apply your method to an elliptic one of uniform depth.

Prove that the speed of the slowest mode with zero vorticity in such a sea with semi-axes  $a, b$  is given by

$$\sigma^2 = \frac{18a^2 + 6b^2}{5a^2 + 2b^2} \frac{c^2}{a^2}$$

where  $c^2 = gh$ ,  $h$  being the depth.

4. Prove that the effect of a variable pressure over a small area of a liquid surface in raising long waves is that of a variable source. If the

total pressure varies harmonically with speed  $\sigma$ , prove that the velocity potential is of the form

$$\phi = \frac{1}{4} \{J_0(kr) \sin \sigma t - Y_0(kr) \cos \sigma t\}.$$

5. Investigate the problem of tidal oscillation in a plane horizontal sheet of water having in the undisturbed state a motion of uniform rotation about a vertical axis. Prove that in the case of free waves in an infinitely long uniform straight canal, the tidal height is of the form

$$\zeta = ae^{ik(ct-x) - \frac{2\omega}{c}y}$$

where  $c^2 = gh$ ,  $h$  being the depth of the canal.

6. Discuss fully the free oscillation, symmetrical with respect to the equator, of a sheet of water of depth  $h$  covering the earth rotating with an angular velocity  $\omega$ .

7. Investigate, by Hough's method, the Tides of long period in an ocean of uniform depth covering the earth, the mutual attractions of water particles and the rotation of the earth being taken into account.

8. What are laminar motions of a liquid? Prove that in the light of such motion, the effect of viscosity on oceanic tides is insensible except for a stratum at the bottom.

9. Investigate waves of finite amplitude by the method of Riemann. Obtain an expression for the wave-velocity, and discuss the change in the wave-profile during propagation.

10. Obtain equations of motion for one-dimensional propagation of waves in a canal of varying rectangular section.

Find the tidal height in the case of free oscillations in a canal, the breadth of which is constant, its depth varying according to the law

$$h = h_0 \left( 1 - \frac{x^2}{a^2} \right).$$

Investigate the forced oscillations in such a canal due to a uniform disturbing force  $f \cos \sigma t$ .

## EIGHTH PAPER

*The questions are of equal value.*

### FIRST HALF

*Examiner—DR. H. K. SARKAR, D.Sc.*

*Answer THREE questions only.*

1. Discriminate, with illustrations, between standing and progressive waves, and explain how one can be produced from the other. Calculate the energy of a system of either standing or progressive waves.

Classify surface-waves, and describe the methods you would employ to discuss theoretically the features that characterize each of the types of waves of your classification, stating the hypothesis with which you work.

2. Define Wave-velocity and Group-velocity. Cite instances, within your purview, of waves travelling with a velocity (i) dependent on, and (ii) independent of, wavelength.

Give an account of Group-velocity phenomenon, with special reference to the following: (i) origin, (ii) physical appearance and the behaviour of individual member belonging to a group of waves, (iii) mathematical expression of group-velocity, working out the corresponding expressions for (a) deep water gravity waves, and (b) capillary water waves.

3. Discuss the theory of the waves produced in deep water by a local disturbance of the surface—in the shape of an initial distribution of surface-impulse ( $\epsilon\phi_0$ ), the surface being undisturbed and horizontal initially, and describe the principal features of the waves.

4. Investigate surface waves produced in the flow of a uniform stream by a submerged cylindrical obstacle whose radius is small compared with the depth of its axis.

5. Investigate two dimensional oscillations of water across a channel whose section consists of two straight lines inclined at  $45^\circ$  to the vertical.

## SECOND HALF

*Examiner*—DR. N. N. SEN, D.Sc.

*Answer THREE questions.*

6. Obtain equations for wave propagation in two dimensions, and discuss the nature of surface waves produced from rest due to an initial elevation concentrated in the immediate neighbourhood of the origin.

7. Taking into consideration the gravitational and cohesional forces, investigate the stability of one horizontal layer of liquid flowing on another.

8. Discuss the vibrations of a cylindrical jet-surface which is subject to capillary forces.

9. Investigate, as fully as you can, the wave-pattern produced by the motion of a fishing line through still water.

10. Discuss the effect of viscosity on water-waves in a sheet of water of infinite depth. Prove that the motion is approximately irrotational, and find an expression for the wave-elevation and the velocity of propagation.

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**(Advanced Dynamics)****SEVENTH PAPER***The questions are of equal value.***FIRST HALF***Examiner—PROF. N. M. BOSE, D.Sc.**Answer THREE questions.*

1. The centre of gravity of a solid of revolution is fixed, while the axis of figure is constrained to remain in a plane fixed relatively to the earth. The solid being set in rotation about its axis of figure, determine its subsequent motion, and show how this instrument can be used to determine the latitude of a place when the plane of the meridian is known. Explain why it is most advantageous to take the solid to be either a ring or a disc.

2. A solid of revolution is placed with its axis vertical on a rough horizontal plane, the height  $h$  of the centre of gravity being greater than the radius of curvature  $\rho$  at the point of contact, so that the position is unstable in the absence of rotation. Prove that if it be set spinning about the vertical axis with angular velocity  $\omega$ , the condition for stability is

$$\omega^2 > \frac{4A'M_G(h-\rho)}{(C+Mh\rho)^2},$$

if  $A'$ ,  $A$ ,  $C$  are the principal moments of inertia at the point of contact.

3. Three equal particles are attached at equal intervals to a tense string. Draw sketches to show the different types of its normal oscillations, and determine the periods of these oscillations. Also determine a set of normal co-ordinates for this system.

4. Investigate the phenomenon of precession and obtain an expression for the solar precession. Show that the total solar precession in a year is approximately

$$\frac{3\pi e^2 \cos \omega}{792.5},$$

where  $\omega$  is the obliquity of the equator to the ecliptic and  $e$  is the eccentricity of a meridional section of the earth which is supposed to be a homogeneous oblate spheroid.

5. Obtain the equation of transverse oscillations of a uniformly stretched homogeneous membrane. Determine the general expression for a principal oscillation of a membrane in the form of an isosceles right-angled triangle of which the boundary is fixed.

**SECOND HALF***Examiner—DR. S. GHOSH, D.Sc.**Answer THREE questions.*

1. Distinguish between ordinary stability and secular stability.

Considering the small motions of a gyrostatic system with two degrees of freedom, show that it may be secularly unstable, yet stable in the ordinary sense.

2. A uniform rod  $AB$  is suspended from a fixed point  $O$  by a short rod  $OC$  which is attached to it at right angles at its middle point. Equal weights are suspended from  $A$  and  $B$  by strings of equal lengths, the whole system forming a somewhat sluggish balance. If one weight be drawn slightly aside from the vertical and allowed to oscillate, the system starting from rest, discuss the subsequent motion.

3. Obtain the fundamental cubic for the determination of the motion of a common top on a perfectly rough horizontal plane.

If  $\alpha, \beta, \gamma$  be the roots of the fundamental cubic, show that the vertical reaction  $R$  of the ground is given by

$$R = g + \frac{gh^2}{3A} \left\{ g \left( \cos \theta - \frac{\alpha + \beta + \gamma}{3} \right)^2 + \alpha\beta + \beta\gamma + \gamma\alpha - \alpha^2 - \beta^2 - \gamma^2 \right\},$$

where  $A$  is the moment of inertia of the top at the lowest point about a straight line perpendicular to the axis of symmetry,  $h$  the distance of the C.G. from the lowest point and  $\theta$  the inclination of the axis to the vertical.

4. A uniform wire, in the shape of an ellipse of semi-axes  $a, b$ , rests upon a rough horizontal plane with its minor axis vertical and a particle of equal mass is suspended by a fine string of length  $l$  attached to the highest point. If vibrations in a vertical plane be performed, prove that their periods will be those of pendulums of whose lengths are the values of  $x$  given by the equation

$$\{x(3b - 2a^2/b) + 5b^2 + k^2\}(x - l) + 4b^2l = 0,$$

where  $k$  is the radius of gyration about the centre of gravity.

5. Establish the equations of motion of a body relative to the surface of the earth, taking the diurnal rotation into account.

A particle is projected vertically upwards in vacuo with velocity  $V$ ; show that it reaches the ground again at a point

$$\frac{4\omega V^3 \cos \lambda}{3g^2}$$

deviated to the west of the point of projection, where  $\omega$  is the angular velocity,  $\lambda$  the latitude of the place, and  $g$  the value of gravity at the place.

## EIGHTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{MR. B. M. SEN, M.A., M.Sc.} \\ \text{DR. S. GHOSH, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Six questions are to be answered.*

1. Derive the Lagrangian equations for a dynamical system with generalized co-ordinates. A uniform ring of mass  $m$  and radius  $b$  rolls inside a

perfectly rough uniform ring of mass  $M$  and radius  $a$ , which is movable about its centre in a vertical plane. If  $\theta, \phi$  be the angles turned through by the rings from their positions of equilibrium, and  $a\theta + b\phi = (a-b)\psi$ , prove that

$$Ma\theta'' = mb\phi'', (2M+m)(a-b)\psi'' = -(M+m)g \sin \psi.$$

2. Define and illustrate, with an example, a non-holonomic dynamical system, and investigate the modifications of the Lagrangian equations for such a system.

A hoop is projected with velocity  $V$  down a plane of inclination  $\alpha$ , the coefficient of friction being greater than  $\tan \alpha$ . It has initially such a backward spin  $\Omega$  that after a time  $t_1$ , it starts moving up the plane and continues to do so for a time  $t_2$ , after which it again descends. If the motion is in a vertical plane perpendicular to the inclined plane, prove that

$$(t_1 + t_2) g \sin \alpha = a \Omega - V.$$

3. Define Lagrange's and Poisson's bracket expressions for a dynamical system, and investigate their mutual relations.

If  $f, \phi, \psi$  are any three functions of  $q_1, q_2, \dots$  and the corresponding momenta  $p_1, p_2, \dots$ , show that with the usual notation

$$((f, \phi), \psi) + ((\phi, \psi), f) + ((\psi, f), \phi) = 0.$$

4. Investigate the principle of Least action, and prove that the orbits in the dynamical system correspond to geodesics on a certain surface. Apply this to planetary motion.

5. Define a relative integral-invariant, and give an illustration of it.

If the system of differential equations

$$\frac{dq_r}{dt} = Q_r, \frac{dp_r}{dt} = P_r \quad (r=1, 2, \dots, n),$$

where  $\theta_1, \theta_2, \dots, \theta_n, P_1, P_2, \dots, P_n$  are given functions of

$$q_1, q_2, \dots, q_n, p_1, p_2, \dots, p_n, t,$$

possess the relative integral invariant

$$\int \sum_{r=1}^n p_r \delta q_r,$$

show that the equations have the Hamiltonian form.

6. Prove that the transformation

$$q_1 = \lambda_1^{-\frac{1}{2}} (2Q_1)^{\frac{1}{2}} \cos P_1 + \lambda_2^{-\frac{1}{2}} (2Q_2)^{\frac{1}{2}} \cos P_2,$$

$$q_2 = -\lambda_1^{-\frac{1}{2}} (2Q_1)^{\frac{1}{2}} \cos P_1 + \lambda_2^{-\frac{1}{2}} (2Q_2)^{\frac{1}{2}} \cos P_2,$$

$$p_1 = \frac{1}{2} (2\lambda_1 Q_1)^{\frac{1}{2}} \sin P_1 + \frac{1}{2} (2\lambda_2 Q_2)^{\frac{1}{2}} \sin P_2,$$

$$p_2 = -\frac{1}{2} (2\lambda_1 Q_1)^{\frac{1}{2}} \sin P_1 + \frac{1}{2} (2\lambda_2 Q_2)^{\frac{1}{2}} \sin P_2,$$



is a contact transformation and that it changes the system

$$\frac{dq_r}{dt} = \frac{\partial H}{\partial p_r}, \quad \frac{dp_r}{dt} = -\frac{\partial H}{\partial q_r} \quad (r=1, 2),$$

where 
$$H = p_1^2 + p_2^2 + \frac{1}{8}\lambda_1^2(q_1 - q_2)^2 + \frac{1}{8}\lambda_2^2(q_1 + q_2)^2$$

into the system

$$\frac{dQ_r}{dt} = \frac{\partial K}{\partial P_r}, \quad \frac{dP_r}{dt} = -\frac{\partial K}{\partial Q_r}, \quad (r=1, 2)$$

where 
$$K = \lambda_1 Q_1 + \lambda_2 Q_2.$$

Integrate this system and hence integrate the original system.

7. Show that the only dynamical systems which possess integrals linear in the momenta are those which possess ignorable co-ordinates, or which can be transformed by an extended point-transformation into systems which possess ignorable co-ordinates.

8. Show that Hamilton's principal function, for a particle moving in a plane under a central force  $\frac{\mu}{r^2}$ , is given by

$$S = -b_1 t + b_2 \theta + \int \left\{ \frac{2\mu}{r} + 2b_2 - \frac{b_2^2}{r^2} \right\}^{\frac{1}{2}} dr + b_3.$$

Give an interpretation of the constants  $b_1, b_2, b_3$ .

9. If in the dynamical system defined by the equations

$$\frac{dq_r}{dt} = \frac{\partial H}{\partial p_r}, \quad \frac{dp_r}{dt} = -\frac{\partial H}{\partial q_r} \quad (r=1, 2),$$

the integral of energy is

$$H(q_1, q_2, p_1, p_2) = h$$

and if

$$V(q_1, q_2, p_1, p_2) = c$$

denotes any other integral not involving the time, then the expression  $p_1 dq_1 + p_2 dq_2$ , where  $p_1$  and  $p_2$  have the values found from these integrals, is the exact differential of a function

$$\theta(q_1, q_2, h, c);$$

and the remaining integrals of the system are

$$\frac{\partial \theta}{\partial c} = \text{constant}, \quad \text{and} \quad \frac{\partial \theta}{\partial h} = t + \text{constant}.$$

**(Advanced Astronomy)****SEVENTH PAPER***The questions are of equal value.***FIRST HALF***Examiner—MR. B. C. DAS, M.Sc.**Answer ANY THREE questions.*

1. What is Ivory's hypothesis regarding the temperature of the atmosphere at different heights? Deduce the law of density with the height on this hypothesis.

Assuming the differential formula for refraction

$$dR = \frac{d\mu}{\mu} \cdot \frac{\alpha\mu_0 \sin z}{\sqrt{\mu^2 r^2 - \alpha^2 \mu_0^2 \sin^2 z}},$$

show how to obtain several terms of  $R$  on Ivory's hypothesis.

2. Taking into consideration the spheroidal form of the earth, find the conditions that a map of it may be conformal.

If the point  $\beta, \lambda$  on a sphere be represented on a plane by the point whose co-ordinates are

$$x = \frac{\cos \beta \cos \lambda}{1 + \cos \beta \sin \lambda}, \quad y = \frac{\sin \beta}{1 + \cos \beta \cos \lambda},$$

show that a circle on the sphere with radius  $\rho$  and centre  $\beta_0, \lambda_0$  will be represented by a circle on the plane having for radius

$$\frac{\sin \rho}{\cos \rho + \cos \beta_0 \sin \lambda_0}$$

and for the co-ordinates of its centre,

$$\frac{\cos \beta_0 \cos \lambda_0}{\cos \rho + \cos \beta_0 \cos \lambda_0} \quad \text{and} \quad \frac{\sin \beta_0}{\cos \rho + \cos \beta_0 \sin \lambda_0}.$$

3. What are the fundamental assumptions made with regard to the accidental errors of observation? Explain clearly what you understand by the terms 'error function' and 'probability curve'. Discuss the continuity of the probability curve, and determine its equation. Verify the principle of least squares in the general case of indirect observations.

4. Explain briefly how to determine the outline of the moon's shadow upon the earth at any instant during a solar eclipse. Find also the place on the earth where the eclipse is central at noon.

5. Prove that if  $B$  be the brightness of Venus as it would be seen from the sun, its greatest brightness as seen from the earth is  $\cdot 62 B$  nearly.

(Given that the ratio of the radius of the orbit of Venus to that of the orbit of earth is as 7 : 10.)

## SECOND HALF

Examiner—DR. B. S. RAY, M.Sc., PH.D.

Only THREE questions are to be answered.

6. If the orbit of the earth be an ellipse, find out the effect of aberration on the latitude and longitude of a star.

Shew that the path traced out by a star (due to aberrational variation) is an ellipse the co-ordinates of whose centre are

$$\frac{c}{\mu} \cdot e \cos (\tilde{\omega} - \lambda), \quad \frac{c}{\mu} \cdot e \sin \beta \sin (\tilde{\omega} - \lambda).$$

'It is impossible to find out the displacements by observation.' Justify this statement.

7. Prove that if  $R$  be the angular geocentric radius of the moon,  $r_0$  its apparent radius when on the meridian of a place in latitude  $\phi$ ,  $r$  its apparent radius when the geocentric hour angle of its centre is  $h$ , then

$$\sin^2 R (\operatorname{cosec}^2 r - \operatorname{cosec}^2 r_0) = 4 \sin \pi_0' \cos \phi \cos \delta \sin^2 \frac{1}{2} h,$$

where  $\pi_0'$  is the horizontal parallax of the moon,  $\delta$  its geocentric declination and the earth is regarded as spherical.

8. Explain how to proceed to find the position of the Equator and the Ecliptic at widely separated epoch. Obtain the reduction formulae either for R.A. or for declination in such a case.

9. Explain the principles of a horizontal sun dial.

If  $x$  be the angle between the graduations on a horizontal sun dial indicating  $h_1, h_2$  hours after noon then

$$\tan x = \frac{\sin \lambda \sin \left\{ (h_2 - h_1) \cdot \frac{\pi}{12} \right\}}{\cos \left\{ (h_2 - h_1) \frac{\pi}{12} \right\} - \cos^2 \lambda \sin \frac{h_1 \pi}{12} \sin \frac{h_2 \pi}{12}},$$

where  $\lambda$  is the latitude for which the dial is made.

10. Describe the generalized instrument. Proceed to determine the co-ordinates ( $\alpha, \delta$ ) of a star when  $R, R'$ , the rotations of the scales are known.

## EIGHTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner—DR. N. N. SEN, D.Sc.*

*Answer ANY THREE questions.*

1. Investigate fully the dynamical Theory of Solar Precession and Nutation. Prove that the Celestial Pole describe an ellipse due to solar nutation.

2. Prove that due to aberration every celestial body describes a hodograph of the Earth's orbit. Hence or otherwise shew that if  $f(r, p)=0$  be the equation of the earth's orbit, the path due to aberration of a star is

$$e \left( \frac{k^2}{p}, \frac{k^2}{r} \right) = 0,$$

$k$  being a constant.

3. Find the effect of annual parallax on the angular distance of a star from a neighbouring faint star of negligible parallax. Explain with full mathematical details how the parallax, proper motion, and true distance of the star can be found out from observations of its apparent distance from the neighbouring faint star.

4. Explain fully the method of finding the latitude of a place by the method of two altitudes of the sun (i) on land, (ii) at sea on a ship moving with a definite velocity.

5. Taking the figure of the moon to be a spheroid of small ellipticity, find the equation of its outline as projected on the celestial sphere and of the apparent curve of illumination of its surface as seen from the Earth.

## SECOND HALF

*Examiner—DR. B. S. RAY, M.Sc., PH.D.*

*Attempt ANY THREE.*

6. Define the term 'Linear Series'. Explain fully how will you determine 'the point of bifurcation' of a linear series. Show by a diagram how the stability changes at such a point.

7. Shew that the value of  $\mu$  on the spheroidal series in the (statical) Tidal Problem is given by

$$\frac{\mu}{\rho} = \frac{1-e^2}{e^3} \log \left( \frac{1+e}{1-e} \right) - \frac{6}{e^3} \left( \frac{1-e^2}{3-e^2} \right).$$

8. What are Eddington's hypotheses in the theory of radiative equilibrium? With the help of these hypotheses obtain the relation

$$P = \frac{1}{3} \frac{a}{1-\beta} T^4 \quad (\alpha \rightarrow \text{Stefan's constant})$$

$P$  and  $T$  being pressure and temperature respectively and  $\beta$  being a constant.

9. Assuming that the (radiation pressure) =  $\frac{1}{3} \times$  (energy-density) deduce Stefan's law

$$u = cT^4,$$

where  $u$  is the energy density.

Prove that for gaseous stars having the same mass

$$T \propto \rho_m^{\frac{1}{3}}$$

where  $T$  is the temperature and  $\rho_m$  is the mean density of the star.

10. Write short notes on—

- (a) Cepheid variables.
- (b) Nova (or new stars).
- (c) Russell diagram.
- (d) Giant and Dwarf stars.

## (Lunar and Planetary Theory)

### SEVENTH PAPER

Examiners:  $\left\{ \begin{array}{l} \text{DR. S. C. KAR, M.A., PH.D.} \\ \text{,, S. GHOSH, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Six questions are to be answered.*

1. When  $n$  bodies move under the action of no external forces except their mutual attractions, show that (1) their centre of mass describes a straight line with uniform speed, and (2) the sum of their kinetic and potential energies, is constant.

2. Show that Hamilton's principal function, for a planet moving in a plane round the sun, is given by an expression of the form

$$H = -b_1 t + b_2 \theta + \int \left\{ -\frac{2\mu}{r} + 2b_3 - \frac{b_2^2}{r^2} \right\}^{\frac{1}{2}} dr + b_3.$$

Interpret the constants  $b_1$ ,  $b_2$ ,  $b_3$ .

3. If  $M$ ,  $w$ ,  $E$  be the mean, true, and eccentric anomalies of a planet moving in an elliptic orbit, prove that,

$$M = E - e \sin E,$$

$$\tan \frac{w}{2} = \sqrt{\frac{1+e}{1-e}} \tan \frac{E}{2},$$

$$\text{and} \quad \frac{r}{a} = 1 - e \cos E,$$

where  $r$  is the radius vector from the sun to the planet,  $a$  the semi-major axis, and  $e$  the eccentricity of the elliptic orbit.

Obtain an expansion of  $r$  in the form

...

$$\frac{1}{2} B_0 + \sum_{i=1}^{\infty} B_i \cos iM.$$

4. Express the Hamiltonian function of the problem of three bodies in Jacobi's co-ordinates, and show that it has the form

$$H = \frac{1}{2m_1} (y_1'^2 + y_2'^2 + y_3'^2) + \frac{1}{2m_4} (y_4'^2 + y_5'^2 + y_6'^2) - \frac{m_2 m_3}{r_{23}} - \frac{m_2 m_1}{r_{31}} - \frac{m_1 m_3}{r_{12}}$$

5. Prove Laplace's theorem on the stability of the planetary system, pointing out the assumptions you make for the purpose.

6. What do you mean by the restricted problem of three bodies? Obtain Jacobi's integral of energy in this case and show how with its help, Tisserand's criterion for the identity of a comet, can be deduced.

7. Define the principal and the complementary parts of the perturbation function in the problem of three bodies, and indicate how you can deduce the complete perturbation function from a knowledge of its principal part.

8. Investigate the equilateral triangle solution of the problem of three bodies and discuss its stability.

## EIGHTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{MR. B. B. SEN, M.Sc.} \\ \text{DR. S. GHOSH, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Six questions are to be answered.*

1. Neglecting the solar parallax, the solar eccentricity, and the moon's latitude, obtain Hill's equations for the motion of the moon, in the form

$$D^2(us) - Du \, Ds + 2m(s \, Du - u \, Ds) + \frac{9}{4} m^2 (u+s)^2 = C,$$

$$D(u \, Ds - s \, Du - 2m \, us) + \frac{3}{2} m^2 (u^2 - s^2) = 0$$

the symbols having their usual significance.

2. Define Hill's variational curve. Show that its approximate form is given by an equation

$$\frac{1}{r^3} = c_0 + 2c_2 \cos 2l,$$

where  $c_0$  and  $c_2$  are constants.

3. Show that in Hill's lunar theory, the motion of the node depends on the equation

$$D^2 z - z \left( \frac{h}{r^3} + m^2 \right) = 0.$$

Show further that the solution of the equation depends on the determination of a quantity  $g$  from a determinantal equation.

4. Obtain the Canonical equations in the problem of three bodies in Delaunay's elements, and indicate a method of integrating them.

5. Deduce De Pontécoulant's equations of the motion of the moon.

$$\frac{1}{2} \frac{d^2}{dt^2} (r^2) - \mu \left( \frac{1}{r} - \frac{1}{a} \right) = r \frac{\partial R}{\partial r} + 2 \int d' R,$$

$$\frac{dv}{dt} - \frac{h(1+s^2)}{r^3} = \frac{1+s^2}{r^3} \int \frac{\partial R}{\partial v} dt,$$

$$\frac{d^2}{dt^2} \left( \frac{rs}{\sqrt{1+s^2}} \right) + \frac{\mu}{r^3} \frac{rs}{\sqrt{1+s^2}} = \frac{\sqrt{1+s^2}}{r} \frac{\partial R}{\partial s} + \frac{s}{\sqrt{1+s^2}} \frac{\partial R}{\partial r}.$$

6. What do you understand by the evection of the moon? Show after Pontécoulant that it is

$$\frac{15}{4} me \sin (2\xi - \phi).$$

7. Show that owing to the perturbation of the sun, the node of the moon's orbit moves in a direction opposite to that in which the moon moves.

8. Neglecting second and higher order quantities, obtain a development of the solar perturbation function for the motion of the moon, in a form appropriate for Pontécoulant's investigation.

## (Geodesy and Geophysics)

### SEVENTH PAPER

*The questions are of equal value.*

*Answer THREE questions from EACH half.*

#### FIRST HALF

*Examiner—DR. K. M. BASU, D.Sc.*

1. If  $\phi(\Delta)d\Delta$  be the probability that in making the measurement of an unknown quantity an error be committed lying between  $\Delta$  and  $\Delta + d\Delta$ , show that

$$\phi(\Delta) = \frac{h}{\sqrt{\pi}} e^{-h^2 \Delta^2}$$

where  $h$  is a constant. Hence deduce the principle of Least Squares.

2. Supposing the earth to be an ellipsoid of revolution show that the length of an arc  $s$  of the meridian ellipse between two stations whose latitudes are  $\phi_1$  and  $\phi$ , is given by

$$s = a[A_0(\phi_2 - \phi_1) + A_2(\sin 2\phi_2 - \sin 2\phi_1) + A_4(\sin 4\phi_2 - \sin 4\phi_1) + \dots],$$

where  $a$  = its semi-major axis, and  $A_0, A_2, A_4 \dots$  are functions of ellipticity.

Deduce Andr e's formula for very small arcs ( $\sigma$ ), viz.,

$$\sigma = \rho_0 \phi + \frac{e^2}{8} \rho_0 \cos 2\phi_0 \cdot \phi^3,$$

where  $\phi = \phi_0 - \phi_1$ ,  $\phi_0 = \frac{1}{2}(\phi_1 + \phi_2)$ ,  $\rho_0$  = radius of curvature at latitude  $\phi_0$ .

3. Given the co-ordinates of initial station  $A(\phi_1, \omega_1)$ , the geodetic distance of a second station  $B$  as  $s$ , and the azimuth of the latter as  $\alpha_1$ , as observed at  $A$ , find out the co-ordinates of  $B(\phi, \omega)$  in terms of series as given by Legendre, viz.,

$$\begin{aligned} \phi - \phi_1 + \frac{s}{\rho_1} \cos \alpha_1 - \frac{s^2}{2\rho_1 N_1} \tan \phi_1 \sin^2 \alpha_1 \\ - \frac{3}{2} \frac{e^2}{1 - e^2} \frac{s^2}{2\rho_1 N_1} \sin^2 \phi_1 \cos^2 \alpha_1 + \dots, \\ \omega = \omega_1 + \frac{s}{N_1} \frac{\sin \alpha_1}{\cos \phi_1} + \frac{s^2}{N_1^2} \frac{\tan \phi_1 \sin \alpha_1 \cos \alpha_1}{\cos \phi_1} + \dots, \end{aligned}$$

where  $\rho_1 = a(1 - e^2)/\Delta_1^3$ ,  $N_1 = a/\Delta_1$ ,  $\Delta_1 = \sqrt{1 - e^2 \sin^2 \phi_1}$ .

4. What do you mean by the statement: 'the height of Darjeeling is 6,000 ft. above sea-level'?

$H_A, H_C$  are the heights of two stations  $A$  and  $C$ . The difference in height is measured in successive stages by levelling instruments. Show that

$$H_C = H_A + \sum \frac{C}{A} dh + 2\beta \sin 2\phi \cdot \frac{\Delta \phi}{206265} H_A + 2\beta \sum \frac{C}{A} \sin 2B \cdot \frac{dB}{206265} dh,$$

where  $dh$  is the difference in level between two consecutive stations,  $\phi$  the mean latitude between  $A$  and  $C$ ,  $\Delta \phi$  the difference in latitude in seconds of these two stations,  $B$  the latitude of any of the successive intermediate stations,  $dB = B - B_C$ , and  $\beta$  constant.

5. Write a note on 'the reduction of spheroidal trigonometry to spherical by conformal representations', bearing out the following:—

(i) If  $\omega, v$  be the longitude and polar distance of a point on the spheroid and  $\Omega, V$  be the corresponding co-ordinates on the sphere, then

$$\Omega = a\omega,$$

$$\tan \frac{V}{2} = k \left[ \left( \tan \frac{v}{2} \right)^a \cdot \left( \frac{1 + e \cos \alpha}{1 - e \cos \alpha} \right)^a \right],$$

where  $a, k$  are adjustable constants, and the transformation is such that the meridians and parallel circles of the spheroid are changed to meridians and parallel circles of the sphere.



(ii) The linear magnification ( $m$ ), i.e. the ratio of two corresponding arcs of spheroid and sphere, is given by

$$m = \frac{Ra \Delta^2 \sin V}{a \sin v}, \quad (\Delta^2 = 1 - e^2 \cos^2 v),$$

where  $R$  is the radius of the sphere,  $a$ ,  $e$  the semi-major axis and eccentricity of any meridian section of the spheroid.

#### SECOND HALF

*Examiner*—DR. S. C. KAR, M.A., PH.D.

1. Four observations of equal weights give the following equations—

$$\begin{aligned} x - 2y + 2z &= 3 \\ 3x + 2y - 5z &= 5 \\ 4x + y - 4z &= 21 \\ -x + 3y + 3z &= 14. \end{aligned}$$

Find the best values of  $x$ ,  $y$ ,  $z$ .

2. Describe with theory Bonne's projection in map-making.

Show that the cylindrical projection in which, small areas are conserved, is given by

$$x = c \sin \phi, \quad y = \frac{\lambda}{c},$$

$\phi$  and  $\lambda$  being the latitude and the longitude of the place and  $c$  a constant.

3. Define a geodesic on a surface.

For a geodesic on the spheroidal earth, prove that

$$\cos u \cos a = \text{constant},$$

and

$$ds = a(1 - e^2 \cos^2 u)^{\frac{1}{2}} d\sigma,$$

where the letters have their usual significance.

Describe a practical method for determining a geodesic on the surface of the earth.

4. Describe briefly the various methods used for the determination of the value of  $g$ , at a station.

In the determination of the absolute value of  $g$  at a station, by a pendulum experiment, calculate the correction that is to be applied for the finite amplitude of the pendulum.

5. What do you understand by the deflection of the vertical? How is it calculated at a station?

What are geodetic and astronomical co-ordinates? Explain how the geoid is determined bit by bit.

## EIGHTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{MR. B. B. SEN, M.Sc.} \\ \text{DR. S. GHOSH, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Six questions are to be answered.*

1. Prove Clairaut's theorem that the ellipticity of the stratum of equal density, increases from the centre of the earth towards the surface. What are the assumptions required for the proof of the theorem?

2. Obtain, after Clairaut, the equation

$$\epsilon \int_0^c \rho' a'^2 da' - \frac{1}{5c^3} \int_0^c \rho' \frac{\partial}{\partial a'} (\epsilon' a'^4) da' - \frac{1}{5} c^2 \int_0^c \rho' \frac{\partial^2}{\partial a'^2} da' - \frac{c^2 c^2}{8\pi f} = 0,$$

where  $\rho'$  is the density of the stratum whose compression is  $\epsilon$  and mean radius  $c$ ,  $a$  the mean radius of the outer surface,  $f$  the constant of gravitation, and  $\epsilon$  the angular velocity of the earth.

Hence deduce that the strata of equal densities within the earth are oblate.

3. Describe Bernoulli's equilibrium theory of tides, and discuss the tides of long period and the diurnal tides.

4. Obtain Airy's equation for the tidal oscillation in a canal, and apply it to an equatorial canal.

5. Describe the theory of a horizontal seismometer. When is an instrument aperiodic? What is the necessity of damping in a seismometer?

6. Show how to find the relation between the time  $T$  taken by a seismic ray in passing from one point of the earth's surface to another and the distance  $\Delta$  between those points measured along the earth's surface.

What are time-curves, and how are they drawn? What are their uses?

Define the angle of emergence. How is it measured?

7. Obtain Bouguer's correction for the value of  $g$  in the form

$$\delta g = -\frac{3}{2} \cdot \frac{\rho}{\rho_m} \cdot \frac{h}{R} \cdot g.$$

What do you understand by isostasy? Describe the theories of isostatic compensation.

**(Electricity and Magnetism)****SEVENTH PAPER***The questions are of equal value.**Answer not more than THREE questions from EACH half.***FIRST HALF***Examiner—PROF. S. N. BOSE, M.Sc.*

1. Prove the following theorems:—

Given a system of charged conductors at rest (i) the energy of the field is least, as it is, with the distribution of charge on each conductor such as to make it an equipotential, and (ii) the introduction of a new uncharged conductor into the field lessens the original energy.

2. State the field equations appropriate to the magnetostatic behaviour of permeable matter.

An infinite solid elliptic cylinder of soft iron is placed in a uniform magnetic field having the direction of a principal axis of its cross-section. Find the modified inside and outside.

3. Assuming the energy of the magnetic field to be

$$\frac{1}{8\pi} \iiint (\vec{\nabla} \times \vec{H})^2 d\tau$$

deduce the expression for the energy of a system of linear currents in the form

$$W = \frac{\mu}{2c^2} \{ L_{11} J_1^2 + 2L_{12} J_1 J_2 + L_{22} J_2^2 + \dots \}$$

and prove by use of the equation of energy that the force on the conductors corresponding to a generalized co-ordinate

$$\theta = \frac{\mu}{c^2} \left\{ \frac{\partial}{\partial \theta} (L_{12} J_1 J_2 + \dots) \right\}.$$

4. Find Kirchhoff's solution of the wave equation, and show how the Poisson-Lionville solution may be derived as a particular case.

5. Find the equation of continuity from the field equations, and thence derive Kirchhoff's rule on current strengths at a junction in a circuit.

Two cells of E.M.F.'s  $e_1$ ,  $e_2$  and resistances,  $r_1$ ,  $r_2$  are connected in parallel to the ends of a wire of resistance  $R$ . Show that the current in the wire is given by

$$\frac{e_1 r_2 + e_2 r_1}{r_1 r_2 + R(r_1 + r_2)}.$$

Describe briefly some method of direct experimental verification of the equation of continuity of charge and current.

## SECOND HALF

Examiner—DR. S. C. KAR, D.Sc.

1. Show that at any point where there is no charge the electrostatic potential  $V$  satisfies the equation,

$$\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2} + \frac{\partial^2 V}{\partial z^2} = 0.$$

Transform this equation to polar co-ordinates and discuss the nature of the solution,

$$V = f_1(r) f_2(\theta) f_3(\phi).$$

What are the restrictions imposed on the choice of the functions?

The density of electric charge on a spherical shell of radius  $a$  is given to be

$$\sigma = \sigma_0 + \sum_{n=1}^{\infty} \epsilon_n P_n(\cos \theta).$$

Calculate the value of the electrostatic potential inside and outside the shell.

2. Show that the force on a charged conductor in an electrostatic field may be regarded as due to a system of stresses in the medium, and find the principal axes of the stresses so postulated at any point in the medium.

What will be the distribution of stresses in the electromagnetic field of a progressive plane wave in vacuum?

3. A small magnet of moment  $M$  is held in the presence of a very large fixed mass of soft iron of permeability  $\mu$  with a very large plane face: the magnet is at a distance  $a$  from the plane face and makes an angle  $\theta$  with the shortest distance from it to the plane. Show that a certain force, and a couple

$$(\mu - 1)M^2 \sin \theta \cos \theta / 8(\mu + 1)a^3,$$

are required to keep the magnet in position.

4. An alternating source of E.M.F. is impressed in a circuit of resistance  $R$  with self-inductance  $L$  and capacity  $C$ ; discuss the nature of the current in the circuit. Show that, when  $L$  is small compared with the resistance of the circuit, the influence of self-inductance can be compensated by adjusting the capacity.

5. Show that for a suitable angle of incidence a plane electromagnetic wave will be reflected completely polarized from the plane boundary of separation of two insulating media.

Show further how a method of comparison of specific inductive capacities of two media may be based on this fact.

## EIGHTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{MR. S. GUPTA, M.Sc.} \\ \text{DR. S. C. KAR, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Try FIVE questions only.*

1. Prove that the wave-equation,

$$\nabla^2 \psi - \frac{\partial^2 \psi}{c^2 \partial t^2} = 0,$$

has a solution of the form,

$$\psi = \frac{a}{\Sigma(x-x')^2 + c^2(t-t')^2}.$$

Hence or otherwise find the electromagnetic potentials of a point-charge moving in any manner.

2. A rigid distribution of charge moves with a constant velocity. Show that the determination of the field may be made to depend on a statical problem.

If, in particular, the distribution in question be uniform and confined to the surface of a sphere, find its potential, given the potential of a conducting prolate spheroid bearing a charge  $e$  to be of the form

$$\phi = \frac{e}{2\sqrt{a^2 - b^2}} \cdot \log \frac{a + \sqrt{a^2 - b^2}}{a - \sqrt{a^2 - b^2}}.$$

3. Obtain the field of an accelerated electron in the form

$$\begin{aligned} \vec{E} &= -\frac{e}{c^2 r} \cdot \left( \frac{\partial'}{\partial t} \right)^2 + \frac{e}{r^2} \left( \frac{\vec{r}}{r} - \frac{\vec{v}}{c} \right) \left( 1 - \frac{v^2}{c^2} + \frac{(\vec{v} \cdot \vec{r})}{c^2} \right) \cdot \left( \frac{\partial'}{\partial t} \right), \\ \vec{H} &= \frac{e}{c^2 r^2} \left[ \frac{\vec{v} \times \vec{r}}{v, r} \right] \cdot \left( \frac{\partial'}{\partial t} \right)^2 + \frac{e}{cr^2} \left[ \frac{\vec{v} \times \vec{r}}{v, r} \right] \left( 1 - \frac{v^2}{c^2} + \frac{(\vec{v} \cdot \vec{r})}{c^2} \right) \cdot \left( \frac{\partial'}{\partial t} \right), \end{aligned}$$

and show that in the wave-zone the vectors  $\vec{E}$ ,  $\vec{H}$ ,  $\vec{r}$  form a mutually perpendicular set.

4. State the electromagnetic equations postulated as exact equations by Lorentz, and show how the equations for material media may be derived from them by a suitable averaging process.

5. Work out the Lorentz-theory of ordinary dispersion, and point out how the dielectric constant (corresponding to any frequency) of a mixture of substances may be inferred from those of its components.

6. Set forth Fresnel's ideas about Faraday effect, and indicate how the Lorentz theory develops them.

7. Explain how the Lorentz-transformation may be treated as equivalent to rotation through an imaginary angle.

Define (i) a symmetric, and (ii) an antisymmetric tensor of the second rank, and prove that  $\sum_i \frac{\partial F_{ik}}{\partial x_i}$  is a four-vector if  $F_{ik}$  is any tensor of the second rank.

8. Explain the phenomena of (i) aberration, and (ii) Doppler effect, from the relativistic standpoint, and point out how the pre-relativistic explanation of aberration cannot hold.

9. State the laws of the electromagnetic field applicable to moving media.

Describe briefly Wilson's experiment on a moving dielectric, and point out how it confirms those laws.

## PHYSICS

### FIRST PAPER

Examiners—	}	PROF. B. B. RAY, D.Sc.
		DR. D. N. MALLIK, B.A., Sc.D.
		MR. D. BANERJEE, M.Sc.
		DR. D. P. RAYCHAUDHURI, D.Sc.

*Answer ANY SIX questions.*

*The questions are of equal value.*

1. Investigate the energy test of stability. Show how to find the motion of a body displaced from a stable position expressed in normal co-ordinates appropriate to  $n$  degrees of freedom.

A cube of density  $\rho$  is floating in water. Find the condition that it will perform small oscillations if slightly displaced. Find the periods.

2. Prove that the components of the pressure tensor are the derivatives of a single function of the components of deformation with respect to these components; hence obtain a general expression for the 'elastic potential'.

3. Derive the equations for the transverse vibration of a stretched string, and discuss the solution for the case when it is limited in both directions.

4. Deduce Lagrange's Equations of the second kind, stating clearly the premises from which you start. Apply them to find the equations of motion in spherical polar co-ordinates and also the equation of energy.

5. State Kepler's laws of planetary motion, and show how the universal laws of gravitation may be deduced from them.

6. Discuss the motion of a symmetrical top under gravity.

7. Give the theory and experimental arrangement by which you can determine Avogadro's number by observations on Brownian particles.

8. State the significance of Boltzman's  $H$ -function, and show the relation between  $H$  and thermodynamic probability and entropy of any system.

9. Discuss fully the physical significance of  $\psi$  and  $\theta$  in Gibb's canonical distribution of densities.

10. Discuss the fundamental difference between Bose-Einstein and Fermi-Dirac Statistics, and compare them with classical statistics.

## SECOND PAPER

Examiners—  $\left\{ \begin{array}{l} \text{DR. S. DATTA, D.Sc.} \\ \text{MR. J. C. MUKHERJEE, M.A.} \\ \text{,, D. K. MAJUMDAR, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Answer SIX questions only.*

1. Describe a method of measuring accurately very low temperatures.

2. Describe a method of measuring the conductivity of air.

3. What is Reaction Constant? Explain how a knowledge of its variation with temperature at constant pressure enables one to determine the Heat of Reaction.

4. What is 'Phase Rule'? Clearly explain the meaning of the various terms involved in it. How can it be deduced from consideration of the Thermodynamic Potential?

5. Clearly explain what led Planck to formulate his famous Quantum Theory.

6. What are the defects of a prism? How can the defects in large aperture prisms be localized and removed? Describe and explain the method you would employ for the purpose.

7. What method would you adopt for determining the wavelength of light very accurately? State and explain the advantages of your method over similar other methods.

8. Write a full note on Photographic Objectives.

9. Give an account of any theory which attempts to represent the variation with temperature the specific heat of hydrogen at low temperatures. How has the discovery of Para- and Ortho-hydrogen accounted for the anomalous curve of the specific heat of hydrogen?

## THIRD PAPER

Examiners— { Mr. P. C. MAHALANOBIS, M.A.  
 „ S. K. ACHARYYA, M.Sc.  
 Dr. B. N. CHAKRABARTI, D.Sc.

*The questions are of equal value.*

*Attempt ANY SIX questions.*

1. Discuss the boundary conditions to be satisfied at the boundary between two media placed in an electric field.

A dielectric sphere is placed in a homogeneous electric field in air. Show that the field inside is weakened in the proportion  $3/(k+2)$ : where ' $k$ ' is the dielectric constant of the material of the sphere.

2. Discuss the principle and merits of different methods of measuring resistance in absolute units, and describe fully one of them.

Work out the dimensions of resistance in electromagnetic system of units.

3. Investigate the conduction of current through a medium which has both conductivity and dielectric constant. Explain fully the significance of 'total current' of Maxwell.

4. Point out clearly what are the essential differences between a 'Ballistic Galvanometer' and a 'Grassot Fluxmeter'. Work out the theory of any one of the instruments.

A large flat coil, radius 10 cm. and of 50 turns, has a small flat coil, radius 1 cm. and of 10 turns situated at its centre, the plane of the two coils being identical. The small coil is in series with a ballistic galvanometer and the resistance of the circuit so formed is 80 ohms. A current of one ampere is suddenly produced in the large coil. Calculate the number of Coulombs which rush in the galvanometer circuit.

5. Write a critical note on the velocity of propagation of an electromagnetic disturbance.

Investigate the form of the Wave-surface in an uniaxial crystal.

6. Discuss Maxwell's contribution to the theory of the electromagnetic field.

7. A train of plane electromagnetic wave is incident on the boundary of two different dielectric media. If the waves are polarised perpendicular to the plane of incidence, investigate the relative intensities of the reflected and refracted beams.

8. Show that an electromagnetic field is completely determined by a single vector ' $\mathbf{Z}$ ', known as Hertzian Vector.

9. The terminals of a condenser of capacity  $C$  are connected by a coil of self induction  $L$  and resistance  $R$ . To the circuit thus formed is applied a periodic E.M.F.,  $E_0 \cos pt$ . The ends of the condenser are also connected by a shunt ' $r$ '. Write down the equation, giving the current through ' $R$ ' and through ' $r$ '. Deduce the expressions for the maximum current—

when (a)  $r=0$ ,

(b)  $r=\infty$ .

10. Discuss fully the statement: 'A good reflector is a good conductor,' and also its converse.



## FOURTH PAPER

Examiners—  $\left\{ \begin{array}{l} \text{PROF. S. K. MITRA, D.Sc.} \\ \text{DR. B. N. CHAKRABARTI, D.Sc.} \\ \text{MR. C. C. BHATTACHARYYA, M.A.} \\ \text{PROF. S. N. BOSE, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Answer ANY SIX questions.*

1. Obtain an expression for the energy radiated by a vibrating electron. Show that it is nil along the direction of vibration but maximum at right angles to it.
  2. What do you understand by 'Anomalous dispersion'? Indicate in brief how the anomaly can be solved by the help of the electron theory.
  3. Write a note on the nuclear structure of radioactive atoms.
  4. Write a note on neutrons. Show how they have been utilized to produce artificial radioactivity.
  5. Deduce, after Einstein, Planck's Law of Black-body Radiation. Show how its superiority over other laws of radiation has been experimentally established.
  6. Discuss the idea of space-quantization of atomic states under external field. Describe the experiment of Stern and Gerlach in support of the above idea.
  7. Explain Pauli's Principle of Exclusion, and show how it can be applied to explain the position of the transition-elements and the rare-earths in the Mendeljeff's table. Explain how Bohr concluded that element 72 (Hafnium) does not belong to the rare-earth group.
  8. Deduce after De-Broglie the equation of Schrödinger. Write down the nature of the solution of the equation in the case of hydrogen atom, and point out those characteristics of the solution which correspond to the old ideas of radial, azimuthal, and magnetic quantum numbers.
  9. Describe Aston's mass-spectrograph. Describe how the masses of the isotopes determined by this apparatus are consistent with those which can be deduced from band spectra observations.
  10. Give an account of the principal characteristics of a substance in the metallic state, and show how far these can be accounted for in terms of the properties of the electrons present in the metal.
- Trace the gradual change in our ideas of the properties of these electrons.
-

## FIFTH PAPER

## GROUP A

## (Spectroscopy)

Examiners— { DR. S. DATTA, D.Sc.  
 { PROF. M. N. SAHA, D.Sc., F.R.S.

*The questions are of equal value.*

*Answer FIVE questions only.*

1. Enunciate the selection principles for the azimuthal and inner quantum numbers, and illustrate by taking the case of a two-valence element.

How do you explain any one of these principles theoretically?

2. Prove, from the theory of rotating electrons or otherwise, that the doublet difference in a pair of terms having the same  $l$ -value is given by

$$\Delta \nu = \frac{R\alpha^2(z-s)^4}{n^3} \frac{1}{l(l+1)}.$$

3. Describe an apparatus for comparing the intensities of the lines forming a multiplet.

Write out in a tabular form the relative intensities of the lines forming a quintet  $p$ - $d$ -multiplet.

4. Write an essay on 'collisions of the second type' and their applications to problems of spectroscopy.

5. Describe how from an analysis of the spectra, it is possible to find out the heat of dissociation (1) of homopolar molecules like  $H_2$ ,  $N_2$ , or  $Cl_2$ , (2) of heteropolar molecules like the alkali halides.

6. Describe, with the aid of diagrams, how the rotational analysis of band *shaded towards the red* can be carried out. Explain clearly how band heads are formed.

7. Give an account of the Paschen-Back effect from the standpoint of the quantum theory.

8. The principal series of the alkalis are easily obtained in absorption whereas the Balmer lines are not ordinarily absorbed by Hydrogen.

Account for the difference of behaviour. Describe an arrangement by which the Balmer lines of Hydrogen could be obtained in absorption.

9. Describe any modern experimental method by which the energy of line excitations has been correlated to that of electronic impact. Discuss the importance of these experiments in Spectroscopy.

## GROUP B

**(Electromagnetic Oscillations and Wireless)**

Examiners— { PROF. S. K. Mitra, D.Sc.  
MR. S. R. KANTÉLU, M.I.R.E.

*The questions are of equal value.*

*Answer ANY FIVE questions.*

1. (a) Define the term 'Effective height' of an aerial. Find the effective height of a quarter wave aerial having a sinusoidal current distribution, with a current anti-node at the earthed end of aerial.

(b) The reactance  $X$  of an aerial is given by the expression

$$X = -\sqrt{\frac{L_0}{C_0}} \cot \omega l \sqrt{L_0 C_0},$$

where  $L_0$  and  $C_0$  are inductance and capacity per unit length of aerial for uniform distribution of current and voltage. Derive a general expression for the harmonic oscillations of the aerial, and show the current distribution for the 3rd harmonic mode of oscillation on the aerial.

2. Describe with vectorial diagram what is meant by 'Regenerative' amplification. What are its advantages and disadvantages? Explain why little regeneration is used in modern broadcast receivers.

3. Describe the mechanism of high frequency generation by the 'Dynatron' and 'Barkhausen' principles, giving mathematical relationships wherever possible.

4. Write notes on *any four* of the following:—

- (a) Piezo-electric and pyroelectric effects.
- (b) Magnetostriction oscillator.
- (c) Double-diode-pentode valve.
- (d) Night effect in direction finding.
- (e) Critical angle in shortwave propagation.
- (f) Radio beam.

5. (a) A continuous wave valve generator is modulated with a single frequency note. Find an expression for the high frequency modulated output power at 100% modulation.

(b) Describe with diagrams 'Single side-band' method of radio telephone transmission, stating its advantages and disadvantages compared with normal transmission.

6. Describe the 'Pulse' method of determining the height of the 'Heavyside Layer', and give details of equipment you would use.

7. Draw the circuit diagram of a three valve broadcast receiver employing indirectly heated cathodes. Give approximate values of the components, and explain their uses. What are decoupling resistances?

8. Describe in general terms the effects of tight coupling in the following cases where the primary circuit is the seat of (a) forced oscillations, (b) free oscillations, (c) sustained oscillations, e.g. by valve or arc.

9. Obtain an expression for the field strength at small distances due to a vertical earthed transmitting aerial.

## GROUP C

**(Dispersion and Scattering of Light)**

Examiners— { MR. S. K. ACHARYYA, M.Sc.  
PROF. K. S. KRISHNAN, D.Sc.

*The questions are of equal value.*

*Answer ANY FIVE questions.*

1. What is 'anomalous dispersion'? How is it explained on the basis of the electron theory?

Describe an experiment to demonstrate the phenomenon.

2. Show theoretically that the fraction of the incident radiation which penetrates a metallic surface and is absorbed by it is nearly proportional to the square-root of its electrical resistance. How is this relation verified experimentally?

3. Deduce Thomson's formula for the intensity of X-rays scattered by light atoms. How far does this formula accord with experimental results?

4. Explain clearly what information one can obtain regarding the structure of a molecule from a study of the polarization of its Rayleigh scattering. Illustrate with reference to a diatomic molecule.

5. Explain why Rayleigh's formula for light-scattering is not applicable to dense fluids. Develop a theory that would be applicable to such media.

6. Discuss the influence of temperature on the relative intensities of the Stokes and the anti-Stokes Raman lines. How would you investigate it experimentally?

7. Give a brief account of the applications of the Raman effect for the elucidation of the structure of simple molecules.

8. Explain on the basis of the Langevin-Born theory the birefringence exhibited by liquids under the influence of electric or magnetic fields. Sketch an experimental arrangement for demonstrating the phenomenon.

9. Write short notes on *any two* of the following:—

(a) Critical opalescence.

(b) Scattering of hard X-rays.

(c) Study of lattice vibrations in crystals by the Raman effect.

(d) The Lorentz formula for the refractivity of dense fluids.

## GROUP D

**(X-Ray and Crystal Structure)**

Examiners— { PROF. D. M. BOSE, M.A., B.Sc., PH.D.  
 DR. S. R. KLASTGIR, D.Sc.  
 „ D. P. RAYCHAUDHURY, D.Sc.

*The questions are of equal value.*

*Answer ANY FIVE questions.*

1. Describe the essential features of a double crystal X-ray spectrometer, and briefly discuss the uses to which it has been put, stating the nature of some of the more outstanding results.

2. Give a simple explanation of the defect of a Compton shift. Describe experiments to show the relation in time and space between recoil electrons and scattered quanta in Compton Effect.

3. Briefly relate the experimental facts observed in connection with secondary absorption. Give an outline of Krönig's theory to explain them, and state how far his theory has been verified.

4. Compare X-ray spectra with Optical spectra.

5. How are photo-electrons produced by X-rays? Discuss the spatial distribution of photo-electrons in the light of any theory.

6. What is the rôle played by 'atomic structure factor' in the phenomenon of X-ray diffraction? How can the above factor be measured experimentally in the case of a diatomic gas or a cubic crystal consisting of atoms of one kind? Are the factors for the above two cases identical?

7. Explain the principle underlying the method generally used to determine uniquely the dimensions of the unit cell of a crystal belonging to any system.

How would you proceed to determine the space group to which a given orthorhombic crystal belongs with the help of Bernal's charts and other published data regarding the characteristic sets of reflection possessed by each space group?

8. Give the essential features of the phenomenon of diffraction of X-rays in liquids. What light does it throw on the structure of liquids? Discuss the physical ideas underlying some of the recent theories to explain the phenomenon.

9. Describe experiments which show that X-rays have essentially the same properties as light waves.

## GROUP E

**(Theory of Relativity)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. P. C. MAHALANOBIS, M.A.} \\ \text{PROF. N. R. SEN, PH.D., D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Answer EITHER Question 1 OR 9 and FOUR more out of the remaining seven questions.*

1. Give a general account of the experimental observations which led to the formulation of the special theory of Relativity.

2. State and explain the Postulates of the special theory of Relativity, and obtain from them the Lorentz transformation equations.

What is 'four-velocity'? How is it connected with space velocity?

3. Deduce Einstein's equation establishing inertia of Energy. Discuss some cases of the application of this principle in modern physics. Construct the dynamical equations (from Relativity point of view) of a massive particle moving with high velocity.

4. Write down the equations of the electromagnetic field in Lorentz-invariant form. Prove that the electric charge is an invariant of Lorentz transformation. Show that the separation of the electromagnetic field into electric and magnetic components has only a relative significance.

5. Indicate briefly how you would obtain the gravitational field of an isolated particle, and discuss some of its characteristics.

6. Compare Einstein's gravitational theory of Relativity and Newton's theory of gravitation with reference to any result which will distinguish between the two theories, and indicate how far actual observations are in agreement with the predicted results.

7. Discuss the Principle of Conservation of Momentum and Energy in the General Theory of Relativity.

8. Give a short account of any theory which has been developed to include gravitation and electromagnetism in one scheme.

9. Write short notes on *any three* of the following:—

- (i) 'Flat' and 'curved' spaces.
  - (ii) Principle of Equivalence.
  - (iii) Covariant differentiation.
  - (iv) Action Principle in Theory of Relativity.
  - (v) Red displacement of spectral lines in gravitational field.
  - (vi) Local co-ordinates.
-

## APPLIED PHYSICS

## FIRST PAPER

Two questions to be attempted from EACH group.

## GROUP A

## (Applied Mechanics)

Examiners— { PROF. P. N. GHOSH, M.A., PH.D.  
DR. S. R. SENGUPTA, B.Sc., PH.D.(GLAS.,

Question 1 is compulsory. Answer ANY ONE of the remaining THREE.

1. (a) Design a shaft to transmit 5,000 H.P. at 100 revolutions per minute, on a working stress of 6 tons per square inch.

(b) Design a timber beam freely supported at its ends and of rectangular cross section (of side  $b$ , and depth  $3b$  inches) to carry a load of 10 tons concentrated at the centre of a span of 20 feet, using a working stress of 700 lb. per square inch.

2. A point in a material is subjected to two-dimensional stress system. The principal stresses are  $+5$  and  $-3$  tons per square inch. Find the maximum tangential stress, the plane on which the direct stress is zero and the shear stress on this plane.

3. A beam of uniform section, freely supported at ends carries a uniformly distributed load of  $w$  units per unit length. Prove that the equation of the deflected central axis is given by

$$y = \frac{4wl^4}{\pi^5 EI} \left[ \sin \frac{\pi x}{l} + \frac{1}{3^5} \sin \frac{3\pi x}{l} + \frac{1}{5^5} \sin \frac{5\pi x}{l} + \dots \right].$$

Calculate the central deflection by considering the first harmonic alone and compare it with the standard result. ( $l$ =length of the beam,  $E$ =Young's Modulus,  $I$ =moment of inertia of section.)

4. The propeller shaft of a steamship is driven by a directly coupled turbo-generator set. Find the position of the node and frequency of the torsional oscillation of the shaft. (Length of the shaft 100 ft., diameter of the shaft 12 inches, weight of material 0.28 lb. per cubic inch; Moment of inertia of the propeller and the generator being equivalent to 10 tons at 4 ft. radius and 40 tons at 5 ft. radius respectively.)

## GROUP B

## (Heat and Thermodynamics)

Examiner—MR. S. K. ACHARYA, M.Sc.

1. Prove

$$C_p - C_v = -T \left( \frac{\partial p}{\partial v} \right)_T \left( \frac{\partial v}{\partial T} \right)_p^2$$

and hence show that

$$1 - \frac{\alpha^2 E v T}{C_p}$$

where  $r$  = ratio of two specific heats,

$T$  = absolute temperature,

$E$  = isothermal elasticity,

$\alpha$  = coefficient of expansion,

$v$  = specific volume.

What is the value of  $C_p - C_v$  in a perfect gas? Briefly describe any method of determining ' $r$ ' experimentally.

2. State Planck's distribution law, and show that both the laws of Wien and of Rayleigh-Jean's are particular cases of it. Hence deduce that the total radiation-density is proportional to fourth power of absolute temperature.

3. Describe the porous plug experiment, and discuss its theoretical aspects. What bearing has the Joule-Thomson effect on the practical method of liquefying hydrogen?

Explain the term 'Temperature of inversion'.

4. Discuss the periodic flow of heat in a long bar, and show how a practical method of measuring conductivity may be based on such considerations.

#### GROUP C

#### (Technical Thermodynamics)

Examiners—  $\left\{ \begin{array}{l} \text{PROF. P. N. GHOSH, M.A., PH.D.} \\ \text{DR. S. R. SENGUPTA, B.Sc., PH.D.(GLAS.).} \end{array} \right.$

1. Determine the indicated horse-power, the brake horse-power, the mechanical efficiency, the thermal efficiency, and the overall efficiency of a gas turbine used in driving a dynamo, the following particulars being given :—

Net mean pressure—105 lb. per/inch<sup>2</sup>.

Revolutions per minute—164.

Cylinder diameter—16 inches.

Stroke—24 inches.

Calorific value of the gas used—150 B.Th.U. per c. ft.

Gas used per hour—5,300 c. ft.

Electrical load—55 K. W.

Efficiency of Dynamo—87%.

2. Compressed air at 120 lb. per sq. inch absolute is drawn into a cylinder and allowed to expand *six* times its original volume. Determine the mean absolute pressure (1) if the temperature is constant, (2) if the cylinder is non-conducting and  $\gamma = 1.408$ . If the initial temperature is 70°F., find the final temperature in the latter case.

3. Derive the expression for efficiency of a turbine under adiabatic conditions.

Steam expands adiabatically in a turbine nozzle. The steam pressure is 200 lb. per sq. inch (gauge) and the counter pressure is 2.4 lb. per sq.



inch absolute. Find the steam velocity. If the steam leaves the turbine with 35 per cent. of its initial velocity, determine the number of lb. of steam per H. P. per hour.

4. What is ideal Steam Engine Cycle? Derive an expression for efficiency according to the cycle with  $t^\circ$  of super heat.

## SECOND PAPER

Examiners - { PROF. P. N. GHOSH, M.A., PH.D., SC.D., F.INST.P.  
MR. P. C. MAHANTI, M.Sc.  
,, J. N. MUKHERJI, O.B.E.

THREE questions are to be attempted from EACH group.

### GROUP A

#### (Electrostatics, Magnetostatics, A. C. Theory and Circuits)

1. State and prove Gauss's Theorem. Show that if a charge of density  $\rho$  is uniformly distributed in an enclosed volume and  $E$  is the electric intensity on its surface

$$\text{div } E = 4\pi\rho.$$

2. Derive an expression for the voltage induced in an alternator consisting of a number of similar full pitch coils joined in series; the air gap flux having sine distribution.

A 4-pole 3-phase alternator runs at 1,500 R.P.M. and has 24 armature slots containing a single layer winding. If each coil has 50 turns and flux per pole is 5 megalines, calculate (a) total voltage per phase, (b) the line voltage when the phases are star connected.

3. An admittance of 0.2 mho is connected in parallel with a pure reactance, the susceptance of such is 0.15 mho. The combined admittance is 0.314 mho. What is the magnitude of the resistance in the circuit?

4. A three-phase four-wire system with 400 volts across the outers have the following impedances in the three branches of an unbalanced star connected three-phase load :--

Branch A—32.8 ohms.

Branch B—16.4     ,,

Branch C—11.5     ,,

What is the current in the neutral, the power supplied to the load, and its power-factor?

5. What are disadvantages of a poor power-factor? Describe and explain fully the method of improving power-factor by means of static condensers.

A 2,000-volt 50 cycle motor installation has a maximum load of 300 K.V.A. at a lagging power-factor of 0.6. Calculate the capacitance of a condenser which can raise the power-factor to 0.95 at maximum load. What will be the power-factor when the load is halved?

(Assume a three-phase system with the condensers delta-connected).

6. An electromotive force given by--

$$e = 2000 \sin \omega t + 400 \sin 3\omega t + 100 \sin 5\omega t$$

is impressed on a circuit consisting of a resistance of 10 ohms, a capacitance of 30 microfarads, and a variable inductance arranged in series with a hot-wire ammeter.

Assuming  $\omega = 300$ , find the value of the inductance which will give resonance with the triple frequency component of the pressure. Estimate also the readings on the ammeter and on a hot-wire voltmeter connected across the supply when resonant conditions exist.

#### GROUP B

### (Instruments and Measurements)

1. Describe the vibration galvanometer, and discuss the factors that determine its current sensitivity and sharpness of tuning.

2. Describe the general construction of a voltmeter by which pressures up to several kilovolts can be measured.

State the principle of working of such an instrument.

Write a short note on the different types of multipliers used for electrostatic voltmeters.

3. Explain the theory of the action of an induction type watt-hour meter, and show how compensation is effected for temperature, friction, and power-factor.

4. Give the principle of working of a single-phase power-factor meter of the electro-dynamometer type. What modifications are necessary in the construction of such an instrument to use it in a three-phase circuit?

5. Show how to deduce the mean spherical candle-power of an electric lamp from the polar curve of its light distribution.

#### THIRD PAPER

Examiners— { PROF. P. N. GHOSH, M.A., P.D., Sc.D., F.Inst.P.  
MR. P. C. MAHANTI, M.Sc.  
,, K. P. CHORESEY, A.M.I.E.E., A.I.E.E.

*The questions are of equal value.*

Four questions to be attempted from Group A and two from Group B

#### GROUP A

### (A. C. Machines)

1. Deduce the expression for the percentage regulation of a transformer.

The short circuit resistance drop of a transformer is 20 volts and the reactance drop is 50 volts. Calculate the percentage regulation for unity power factor and 8 P. F., when it is working on a 1,000 volt line.

2. What are Bucherot Motors? Explain, with the help of a diagram, its starting and running characteristics.

3. State the principle on which the design of regulators for Induction Motor is based.

The resistance of the rotor an of induction motor per phase in 2 ohms, and its normal R.P.M. is 1,440. It has four poles and it runs on a 50 cycle circuit. Find the value of its regulator resistance when it has 9 steps.

4. Write a short note on the principles of working of a mercury are rectifier, and show, with the help of a diagram, how a grid controlled rectifier is useful for clearing a dead short circuit in a D.C. line.

5. Calculate the per cent. reactance of  $2\frac{3}{4}$  mile of a 11 K.V. paper covered cable forming part of a 3,000 K.V.A. system. The reactance of the cable is 0.143 ohm per mile. How would the per cent. reactance vary if it is connected to a 10,000 K.V.A. System?

6. Sketch a single line diagram of connections of tie bar reactance coils in the bus-bars of a big generating station.

Given the following data, calculate the short circuit K.V.A. of the power-house.

- (a) Volt-drop across the reactance is 8.3% of the bus-bar volts when the rated full load current of a section flows through it.
- (b) Total rated K.V.A. of generating plant connected to each section 50,000 K.V.A.
- (c) Percentage generator short circuit reactance 16.6.
- (d) Number of sections—4.

#### GROUP B

### (D. C. Machines)

1. Obtain a general expression for the e.m.f. induced in the armature of a multipolar D.C. Generator.

A 4-pole, 75 K.W. D.C. Generator has 980 conductors and runs at 750 R.P.M. The armature is wave-wound and has a resistance of 0.7 ohm. The brush contact drop at full load is 2 volts. Find the armature flux per pole to give 250 volts on the terminals at no load and at full load.

2. What are the characteristic features of lap and wave wound armatures?

Find the relation between winding pitch and the number of parallel paths through the winding on a D.C. armature, and discuss the conditions which determine the type of winding to be chosen in designing an armature.

3. Explain why sparking is liable to occur at the brushes of a D.C. machine, and describe briefly the methods employed in practice to diminish this tendency.

4. It is desired to reduce the full-load speed of a 460-volt 10-B.H.P. shunt motor by 25% by the insertion of resistance in the armature circuit. The torque is to remain unchanged. Calculate the necessary resistance, given that the field current is constant at 1.1 amperes, the armature resistance is 0.2 ohm and the efficiency of the motor is 85%.

What are the disadvantages of this method of speed control?

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## FOURTH PAPER

## GROUP A

**(Communication Engineering)**

Examiners—  $\left\{ \begin{array}{l} \text{MR. J. N. MUKHERJEE, O.B.E.} \\ \text{PROF. S. K. MITRA, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Attempt FIVE questions only.*

1. Assuming that the double-current system of telegraph working is to be employed, prove that the *five-unit code* is the shortest possible telegraph code.

What are the other advantages of the *five-unit code* over the *Morse Code*?

2. What is the modern method of measuring the transmission efficiency of communication circuits?

Establish the relation between *Deci-bel* and *Deci-Neper*.

What power is generally taken as the reference standard (or zero-level) for measuring the transmission-levels of communication circuits?

Why is the Deci-bel method unsuitable for measuring the transmission efficiency of Electric Power circuits?

3. Establish the fundamental principle of all filter designs, viz. that if  $z_1$  be the impedance of the series-elements and  $z_2$  the impedance of shunt-elements, of a filter net-work, then for all frequencies which pass

unattenuated through the net-work, the value of the ratio  $\frac{z_1}{4z_2}$  must

lie between 0 and  $-1$ .

Prove that a net-work which is made with inductances as series-impedances and condensers as shunt-impedances will act as a low-pass-filter and that its cut-off frequency is given by

$$f = \frac{1}{\pi\sqrt{LC}}.$$

The crude-filter which is used on composite telegraph circuits is made with an inductance of 2.88 Henrys as the series-element and a condenser of capacity  $6 \mu F$  as the shunt-element. What is the approximate cut off frequency of such a filter?

4. The primary constants of a double wire communication circuit are—

$R$	Resistance (in ohms)	per loop-mile.
$L$	Inductance (in Henrys)	„ „
$C$	Capacitance (in Farads)	„ „
$G$	Leakance (in Mhos)	„ „

Prove that the voltage  $e$  and the current  $i$  at any point on the line satisfy the differential equations

$$\frac{d^2 e}{ds^2} = LC \frac{d^2 i}{dt^2} + (RC + LG) \frac{de}{dt} + RGe$$

$$\frac{d^2 i}{ds^2} = LC \frac{d^2 i}{dt^2} + (RC + LG) \frac{di}{dt} + RGi,$$

where  $s$  is the distance in miles from the sending end.

5. Explain fully, with the aid of schematic diagram, the Push-Pull arrangements of valves in radio circuits. What are the characteristic advantages of the arrangement?

6. What do you understand by the Heterodyne method of reception in radio-telegraphy? What are the advantages of this method?

7. What ranges of frequencies are usually utilized for the following?—

- (a) Ordinary telephony.
- (b) Carrier current telegraphy and telephony.
- (c) Radio-telegraphy and telephony.

What do you understand by Upper-side-band and Lower-side-band in radio working and carrier-current?

What are the advantages of suppressed-carrier-working?

8. Prove that a net-work which is composed of impedances  $Z_1, Z_2, Z_3, \dots, Z_n$  joining the points  $P_1, P_2, P_3, \dots, P_n$  to a star-point  $O$  may be replaced by net-work of impedance  $Z_{12}, Z_{13}, \dots, Z_{23}$ , joining all pairs of points  $P$ , the suffixes showing the points connected; where

$$Z_{12} = Z_1 Z_2 \sum \frac{1}{Z}$$

$$Z_{13} = Z_1 Z_3 \sum \frac{1}{Z}$$

and

etc. etc.

$$\sum \frac{1}{Z} = \frac{1}{Z_1} + \frac{1}{Z_2} + \frac{1}{Z_3} + \dots + \frac{1}{Z_n}.$$

9. Explain by the aid of a diagram, how a vertical wire placed at a suitable distance behind a transmitting aerial can act as a reflector.

## GROUP B

## (Wireless)

Examiners— { PROF. S. K. MITRA, D.Sc.  
                  { MR. S. R. KAUTILICK, A.M.I.E.E., M.I.R.E.

Attempt ANY FIVE questions.

1. (a) Define 'Coefficient of Coupling' between two radio circuits inductively coupled.

(b) A valve oscillator works on 300 metres. It is coupled to an aerial circuit through mutual inductance of  $3\mu\text{H}$ . The aerial radiation resistance is 30 ohms and other losses equivalent of 10 ohms. Find the aerial current if the high frequency current in the valve circuit is 50 amperes.

2. (a) Describe a full wave valve rectifying arrangement for rectifying alternating current available at 50 cycles 3 phase.

(b) In the above case what is the frequency of the ripple on the rectified current, and how will you eliminate the ripple?

3. What is meant by the polar curve of reception of an aerial? Obtain an expression for the polar curve of a frame aerial, and describe a method of using the device for finding the 'sense' of distant radio stations.

4. Describe a simple choke controlled broadcast transmitter having the following special features: submodulator, modulator, crystal drive and power magnifier capacity coupled to aerial. Give values of components you would use.

5. Describe, with the help of suitable diagrams the Push-Pull arrangement of valves in radio circuits. What are the advantages of such arrangement?

6. Give sketches of and explain the types of aerials used for (a) medium wave broadcasting, and (b) short wave directional work.

7. Explain what is meant by side-band frequency and percentage of modulation of radio-telephony. Describe some method of measuring the latter.

8. What do you mean by the log-decrement of a circuit?

A circuit has a decrement of '0.012. Find out the number of oscillations executed after which the amplitude will fall to 1% of its initial value.

9. Describe some recent experimental methods of estimating the height of the ionized layers of the upper atmosphere.

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## CHEMISTRY

### (Organic—Special)

<i>Examiners—</i> <i>(Organic 1st,</i> <i>2nd and</i> <i>General</i> <i>Paper)</i>	{	PROF. P. C. MITTER, M.A., PH.D. DR. M. QUDRATI KHUDA, D.Sc. „ A. C. SARKAR, M.A., PH.D. „ D. CHAKRABARTI, D.Sc. „ B. B. DEY, D.Sc. PROF. R. N. SEN, M.A., M.Sc. DR. P. K. BOSE, D.Sc.
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### FIRST PAPER

*The questions are of equal value.*

*Attempt ANY FIVE questions.*

1. Write explanatory notes on the reactions involved in—
  - (a) the conversion of ethyl  $\beta\beta$ -dimethyl acrylate into ethyl  $\beta$ - $\beta$  dimethyl glutarate ;
  - (b) preparation of methyl cyclopentane-2-one-1-carboxylate ;
  - (c) synthesis of Balbiano's acid ;
  - (d) the transformation of ethyl malonate into tetraethyl succinic acid.
2. What is meant by the term 'methylation'? Give a brief resumé of the different methods that have been adopted for this purpose. Discuss the utility of this process in the determination of the constitution of organic compounds.
3. Classify the cyanine dyes which are used for sensitizing photographic plates, and describe the preparation of one typical member of each class.
4. Write short notes on the following :—
  - (a) Hudson's rule
  - (b) Methods of determining the position of the interglucosidic oxygen bridge in a disaccharide.
  - (c) Synthetical experiments in the disaccharide series.
5. Discuss fully the arguments for accepting the view that the strain caused by the distortion of the valencies in large monocyclic rings is partly relieved in most cases by transformation from uniplanar to a multiplanar system.
6. What are the general methods of the synthesis of phenolic aldehydes, ketones, and acids? Discuss fully the constitution of evernic acid.
7. How are the following substances prepared?—
  - (1) Diazoacetic ester.
  - (2) *Asym* Dimethyl hydrazine.
  - (3) Tetramethyl ethylene.
  - (4) Meconine.
  - (5) Cyclohexylmethylamine.
  - (6) Acetylene dicarboxylic ester.

State their uses, if any.

8. 0.1294 g. of a substance having molecular weight 264 was found on analysis to give 0.3207 g. of  $\text{CO}_2$  and 0.0487 g. of  $\text{H}_2\text{O}$ . It gave a methoxy derivative having 22.0%  $\text{OCH}_3$ . The following products were isolated after hydrolysis of the original substance with potash: (i) acetic acid; (ii) an aromatic monobasic acid, the silver salt of which contains 47.0% Ag; (iii) a substance,  $\text{C}_8\text{H}_8\text{O}_3$ , which formed a trimethoxy derivative; and (iv) a liquid product which formed an oxime, a dry ethereal solution of which on treatment with  $\text{PCl}_5$  gave acetanilide. Deduce the probable structural formula of the original substance.

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## SECOND PAPER

*The questions are of equal value.*

*Attempt ANY FIVE questions*

1. Discuss fully the constitution of narcotine.
2. How is purine directly synthesized? How is it prepared from uric acid? Describe *direct* methods of synthesis of—
  - (a) 7-methyluric acid,
  - (b) Hypoxanthine,
  - (c) Thymine.
3. Establish the constitutional formula of menthene by analytical and synthetical methods.
4. What are your arguments in favour of the present constitutional formula of civetone?
5. Give an account of the uses of 1 : 2- and 1 : 3-diketones in the synthesis of heterocyclic compounds.
6. How are the following substances synthesized?—
  - (a)  $\beta$ -Eucaine;
  - (b) Thyroxine;
  - (c) Morindone;
  - (d) Camphorquinone;
  - (e) Novocaine;
  - (f) Pulegone.
7. Describe briefly the synthesis of hæmin.
8. Give an account of the present state of our knowledge of the chemical constitution of carotene and vitamin A.



**(Organic—General)***The questions are of equal value.**Attempt ANY SIX questions.*

1. Give an account of the ketonic acids, with special reference to their methods of preparation, properties, and reactions.
2. What are our present ideas regarding the constitutional formula of glucose?
3. Give a brief account of the chemistry of *cis*- and *trans*-terpin.
4. How are the following dyes prepared? Discuss their constitution :—
  - (a) Rosaniline.
  - (b) Eosin.
  - (c) Methyl orange.
5. Describe the use of sodium and sodium ethoxide in organic synthesis.
6. How are the following prepared?—
  - (a) Carbazole.
  - (b)  $\alpha\beta$ -dimethyl quinoline.
  - (c) *iso* Quinoline.
  - (d) Piperic acid.
  - (e)  $\beta$ -Resorcylic aldehyde.
  - (f) Acetone dicarboxylic ester.
7. What are alkaloids? How are they isolated? Describe the synthesis of nicotine.
8. Write short notes on :
  - (i) Fischer's indole synthesis.
  - (ii) Beckmann change.
  - (iii) Exhaustive methylation.
  - (iv) Hoesch's reaction.

**(Inorganic—Special)**

<i>Examiners— (Inorganic 1st 2nd and General Paper.)</i>	{	DR. P. NEOGI, M.A. PH.D. MR. P. RAY, M.A. DR. P. B. SARKAR, DR. ES SC., A.I.C MR. H. D. MUKHERJEE, M.Sc. DR. R. C. RAY, M.A., D.Sc.
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**FIRST PAPER***The questions are of equal value.**Answer ANY FIVE questions.*

1. Write a short essay on the transmutation of elements, with special reference to the recent work on the production of short-lived isotopes of commoner elements.

2. Write short notes on the following:—

- (a) Distribution of chemical elements in nature.
- (b) Radioactive constant.

3. What are interhalogen compounds and polyhalides? How would you account for their formation? Discuss the nature of the chemical binding within their molecule. Give an account of the methods employed for determining the stability of polyhalide ions.

4. Describe the properties and discuss the constitution of the following oxyacids of sulphur:—

Sulphoxylic acid, Hydrosulphurous acid, Thiosulphuric acid, Trithionic acid, and Pentathionic acid.

5. Give an account of the hydrides and halides of silicon, and compare their properties with those of carbon and boron. Discuss the constitution of the simplest borane.

6. Describe briefly *any three* important inorganic catalytic reactions, noting specially the physico-chemical principles involved in each case. What is the modern view of heterogeneous catalytic reactions?

7. Give a comparative account of complex cyanogen and substituted cyanogen compounds of iron and cobalt. Describe their preparation, and discuss their constitution.

## SECOND PAPER

*The questions are of equal value.*

*Answer ANY FIVE questions.*

1. Write a short essay on the modern trend in the development of analytical methods, noting specially the investigation of traces.

2. Give an account of the various methods employed in quantitative analysis by means of spectroscopy.

3. Name the important sources of the element Germanium. How and by whom was it discovered? Which elements in the Periodic Table does it resemble most? Give an account of its important compounds, and show how they can be obtained in the pure state.

4. Compare the physical and chemical properties of the three elements Osmium, Iridium, Platinum, and their compounds. How would you obtain pure platinum from an alloy containing the above three elements?

5. Give an account of the chemistry of bivalent europium, trivalent titanium, trivalent vanadium, and trivalent thallium.

6. How does zinc occur in nature, and what other metals are found associated with it? In what localities are zinc ores found in India, and how are these being worked out? Give a short account of the Belgian process of extraction of the metal, stating the reasons for its low efficiency. How can electrothermal methods remove some of these defects?

7. What do you understand by the term 'ionic radii'? How have they been calculated? What is meant by 'lanthanide contraction'? How does it explain the peculiarities exhibited by the rare earths, and how is this contraction explained by electronic structure?

**(Inorganic—General)**

*The questions are of equal value.*

*Answer ANY SIX questions, of which Question 8 MUST be one.*

1. What is meant by Mass Spectrum? Describe Aston's method of determining atomic masses. What is 'whole number' rule, and how is its variation accounted for?
2. Make a comparative study of the chemical and physical properties of the elements of Group IV of the Periodic Table. How would you justify the division of the group into two sub-groups?
3. Write short notes on *any two* of the following:—
  - (a) Law of Radioactive Group Displacement.
  - (b) Electrochemical theory of oxidation and reduction.
  - (c) Theory of Indicators.
4. Describe, giving equations, the chemical reactions that occur in—
  - (a) the Lead Chamber during the manufacture of sulphuric acid ;
  - (b) the charging and discharging of a lead accumulator.
5. Write a short account of the following *two* metallurgical processes:—
  - (a) Bessemerising of copper-matter.
  - (b) Electrothermal refining of steel.
6. How are the following substances prepared, and what are their uses?—
 

Thionyl chloride, Sodium nitroprusside, Hydrazoic acid, Nickel carbonyl, and Silico-tungstic acids.
7. How are the oxyacids of chlorine formed? State their properties, and discuss their constitution on the basis of electronic theory.
 

How would you determine the amount of chloride, hypochlorite, and chlorate in a mixture of their alkali salts?
8. A 1.0 gram sample of potassium bromate containing potassium bromide as an impurity was reduced in aqueous solution to bromide and was then precipitated as silver bromide. The precipitate on ignition in a current of chlorine lost 0.28 gram in weight. Calculate the percentage of potassium bromate in the sample.

[Br=80, K=39, Cl=35.5 approx]

**(Physical—Special)****FIRST PAPER**

Examiners—  $\left\{ \begin{array}{l} \text{DR. J. C. GHOSH, D.Sc.} \\ \text{MR. N. G. CHAKRABARTI, M.Sc.} \\ \text{DR. S. K. MAJUMDAR, M.Sc., Ph.D.} \end{array} \right.$

*The questions are of equal value.*

*Not more than FIVE questions are to be attempted.*

1. Define 'Lattice energy'. State in general terms Born's theory of the crystal state.
2. Deduce Maxwell's Distribution Law. Explain the application of this principle in elucidating the kinetics of gaseous reactions.
3. Deduce a relation between the E.M.F. of a cell and the change of internal energy of the system. Is the heat of the reaction always capable of being quantitatively transformed into electrical energy?
4. Write notes on neutron and positron.
5. What do you understand by the polarization of a molecule in an electrical field? How is the Dipole moment of molecules experimentally determined?
6. Explain Joule-Thomson effect and its application in the liquefaction of gases from the thermodynamic point of view. Give an account of attempts that have been made to obtain temperatures approaching absolute zero.
7. Discuss briefly how X-rays have been utilized in the determination of crystal structure.
8. Write an essay on atomic reactions.
9. Explain clearly what is meant by the multiplicity of a spectral series, pointing out whether it refers to spectral terms or spectral lines. What is the relation between the valency of an element and the multiplicity of its atomic spectrum? By using the modern notation and rule of Hund and Russell give the complete configurations of the extra-nuclear electrons of the atoms of sodium, magnesium, potassium and calcium, and the basic term of any one of them. State Rydberg's alternative law of multiplicities.

*Or,*

The constant term of the Lyman Series in the hydrogen spectrum is  $109678 \text{ cm.}^{-1}$  show that—

- (a) the limiting wavelength ( $\lambda_a$ ) of the above series is  $912\text{\AA}$ ,
- (b) the limiting frequency ( $\nu_a$ ) of the above series is  $3.29 \times 10^{15} \text{ sec.}^{-1}$ ,
- (c) the energy value of the atom term ( $E_a$ ) is  $2.153 \times 10^{-11} \text{ ergs}$ ,
- (d) the ionization potential of the hydrogen atom ( $V_{\text{ion}}$ ) is  $13.54 \text{ volts}$ , and
- (e) the heat of ionization of the gram atom of hydrogen ( $Q$ ) is equal to  $310 \text{ cal. (kilogram calories)}$ .

$$h = 6.546 \times 10^{-27} \text{ o.g.s.}; \quad e = 4.77 \times 10^{-10} \text{ o.s.u. (o.g.s.)}; \quad N = 6.062 \times 10^{23}.$$

10. What is dichromatism of an indicator? How would you determine the pH of an unknown buffer mixture from absorption curve of an indicator?

## SECOND PAPER

Examiners—  $\left\{ \begin{array}{l} \text{DR. J. C. GHOSH, D.Sc.} \\ \text{MR. A. T. MAITRA, M.A.} \\ \text{,, K. K. KUMAR, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Not more than FIVE questions are to be attempted.*

1. Discuss the different methods for the determination of single-electrode potential.
2. Discuss the change of specific heat of solids with temperature, with special reference to the work of Nernst, Lindemann, Born, and Debye.
3. How would you evaluate the integration constant in the Clausius-Clapeyron's equation?
4. How is the thickness of surface films measured? Discuss critically the evidence in favour of unimolecular and polymolecular films.
5. Discuss recent work on colloidal electrolytes.
6. What is Brownian movement? How is the Avogadro's Number determined from the studies of Brownian motion?
7. Discuss the physical and chemical properties of elements of the transition period from the standpoint of electronic structure.
8. Discuss the important features of the photochemical reaction between hydrogen and oxygen.

*Or,*

Give an account of the important features of the decomposition of hydrogen iodide (a) in darkness, and (b) in light.

9. Show that the amount of maximum work obtained in the isothermal expansion of a mole of dissociating phosphorus pentachloride, the degree of dissociation increasing from  $\alpha_1$  to  $\alpha_2$  is given by—

$$A = RT \left\{ (\alpha_2 - \alpha_1) + 2 \ln \frac{\alpha_2(1 - \alpha_1)}{\alpha_1(1 - \alpha_2)} \right\}.$$

(Assume perfect gas laws.)

*Or,*

Deduce the following thermodynamic relation between the activity-coefficient ( $f$ ) of a solute and the osmotic-coefficient ( $\phi$ ) of the solvent in

the molality scale ( $m$ ):—

$$1 + m \frac{\partial \ln f}{\partial m} = \phi + m \frac{\partial \phi}{\partial m},$$

and point out the usefulness of this equation.

10. Discuss the application of some electrodes for obtaining the neutralization curve of an acid in presence of an oxidising substance. How would you determine the concentration of KCl solution by conductometric titration? Explain the principle involved in the measurement.

### (Physical—General)

Examiners— { DR. B. N. GHOSH, D.Sc.  
                  ,, S. G. CHAUDHURI, D.Sc.  
                  MR. A. T. MAITRA, M.A.

*The questions are of equal value.*

*Not more than SIX questions are to be attempted.*

*Logarithmic tables will be supplied.*

1. How was the relation  $PI = RT$  for the osmotic pressure of dilute solutions of gaseous substances deduced by van't Hoff?

2. Explain Entropy. Give an expression connecting changes in free energy and entropy of a gaseous system during isothermal expansion.

3. Explain the principle of corresponding states, and deduce Van der Waal's constants in terms of the critical constants of a gas.

4. Deduce the relation between the E.M.F. and concentration of sulphuric acid in a lead accumulator.

What is the highest value of e.m.f. possible in a lead accumulator, and how does the e.m.f. vary during the discharge of the accumulator?

5. Discuss the different methods used in the determination of transport number of ions. What peculiarities have been observed in the conduction of electricity through solid salts?

6. Explain Fajans and Soddy's rule of radioactive transformation. Justify the statement with special reference to lead that 'the atomic weight as determined by chemical methods represents only an average value'.

7. What is meant by Adsorption? State and explain Freundlich's adsorption isotherm. How can it be experimentally verified?

8. Discuss fully the equilibrium relationships of the reaction



How are the equilibrium conditions experimentally determined?

*Or,*

What is the importance of a knowledge of the temperature coefficient of a chemical reaction?

Being given that the temperature coefficient  $k_{31}/k_{21}$  for the saponification of ethyl acetate with caustic soda is 1.82, calculate the energy of activation in calories.

9. Define the affinity of a chemical reaction, and with the help of van't Hoff's equilibrium box obtain an expression for the affinity of a homogeneous gaseous reaction.

*Or,*

Define an ideal solution, and find an exact expression connecting the concentration of such a solution and the depression of the freezing point.

10. Write explanatory notes upon *any five* of the following:—

Activity coefficient, osmotic concentration, parachor, molecular rotation, activation, resonance potential, spectral term, dispersion coefficient, gold number, conductance ratio, and most probable velocity.

*Or,*

Critically review evidence in favour of assuming that ions in solution are hydrated.

## APPLIED CHEMISTRY

### FIRST PAPER

*The questions are of equal value.*

#### FIRST HALF

Examiners— { Mr. N. N. SEN, M.Sc.  
Dr. P. B. SARKAR, DR. ES. SC., A.I.C.  
Mr. H. N. DASGUPTA, M.Sc.

*Attempt ANY THREE questions.*

1. Outline the processes of extracting and purifying copper, giving the chemistry underlying the various operations with special reference to the methods and appliances employed by the Indian Copper Corporation Company, Ltd., at Ghatshila.

2. Give an account of the formation of clay from felspathic rocks. State the characteristic properties and uses of residual kaolin, sedimentary kaolin, fire-clays, semifire-clays, and common brick clay. In what way do impurities present in clay and its physical texture affect the refractoriness and corrosion of fire bricks by slag?

3. Write what you know about the composition, properties, and uses of *any four* of the following alloys:—

(1) Duralumin, (2) Stainless steel, (3) Tinsmith's solder, (4) Nichrome, (5) Monel metal, and (6) Phosphor bronze.

4. Enumerate the different methods for obtaining industrial hydrogen, and describe in detail the one that you consider most suitable for India. How do you purify it for the following purposes?—

- (a) Hydrogenation of Oils and Fats.
- (b) Synthetic ammonia.

5. Write short notes on:—

- (a) Setting of Cement.
- (b) Glass as a super cooled liquid.
- (c) Thermite process.

## SECOND HALF

### (Organic)

Examiners— { DR. T. S. WHEELER.  
 „ M. N. GOSWAMI, M.A., DR. ES. SC.  
 C. R. BARAT, DR. ING.

N.B.—Try ANY THREE of the following.

1. Describe the manufacture of tannic and gallic acids. What are their chemical natures? How is ink prepared, and what considerations are involved in the preparation of good blue-black ink?

2. Write an essay on *one* of the following:—

- (a) Power alcohol.
- (b) 'Cracking' of Hydrocarbons.

3. Write notes on *any three* of the following:—

- (a) Activated charcoal.
- (b) Sugar from wood.
- (c) Casein and caseinogen.
- (d) Chemical and mechanical wood pulp.
- (e) Isoprene and its polymerisation.

4. Discuss the processes for the preparation of gas from coal without the help of water or air at high and low temperatures. What are the important bye-products in each case? Indicate how they are recovered.

5. Describe the commercial preparation of *any three* of the following:—

- (a) Acriflavin.
- (b) Sulphonal.
- (c) Diphenyl oxide.
- (d) Alizarin.
- (e) Aspirin.

Give sketches of the apparatus used, chemical reactions involved, and the industrial uses in each case.

6. Describe the industrial preparation of three important triphenyl methane dyestuffs, and show how the varying grades of colour are obtained by altering their compositions. How do you proceed to dye unbleached cotton yarn with such dyestuffs?



## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

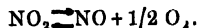
Examiners— { DR. J. C. GHOSH, D.Sc.  
MR. A. MAITRA, M.A.

N.B.—Attempt ANY THREE.

1. Discuss the theory of distillation of liquid mixtures.
2. State Dieterici's equation of state. Calculate the value of  $\frac{RT_c}{p_c}$  from this equation, and discuss how far the value tallies with the experimental data.
3. Discuss the equilibrium represented by the following equation from the standpoint of energetics:—



4. Above 150°C NO<sub>2</sub> begins to dissociate according to



At 390°C the vapour density of NO<sub>2</sub> is 19.37 (H=1) and at 490°C it is 18.04. Calculate the equilibrium constants (expressing concentrations in mole/litre) and heat of dissociation of NO<sub>2</sub>, assuming the latter to be constant between the given temperatures.

5. Discuss the conditions governing the choice of indicators in acid-base titrations. From the data given below, prove that phenol phthalein is a suitable indicator for titrating a normal solution of acetic acid with NaOH.

Dissociation const. for acetic acid =  $1.8 \times 10^{-5}$ ,

Dissociation const. for water =  $1.0 \times 10^{-14}$ ,

Dissociation const. for phenol phthalein acid =  $2.0 \times 10^{-10}$ .

6. Write explanatory notes on *any five* of the following:—

Polar compounds, covalency, induction oven, heavy hydrogen, decomposition potential, overvoltage, conductance ratio, watt, horse-power, international sugar scale.

## SECOND HALF

Examiners— { DR. S. C. NEOGI, D.Sc.  
MR. N. P. BASU, M.Sc.  
DR. S. K. MAJUMDAR, M.Sc. Ph.D.

Answer ANY ONE from EACH group.

## GROUP I.

1. Explain the principle underlying the determination of P<sub>H</sub> by the electric method.
2. Describe any method of determining temperatures over 2000°C. How would you calibrate the same?

3. Give a careful account of how a sample of coal gas is to be drawn and analyzed for its various constituents. Give methods of calculation.

### GROUP II.

*Answer ANY ONE.*

1. Describe a rapid Technical method for the complete analysis of 'chromite'. How would you report your analytical result?

2. What is 'Lithophone'? What are its main constituents? Describe a method for the analysis of the commercial product. What further test would you consider necessary to establish whether it is adulterated or not?

### GROUP III.

### (Organic)

*Answer ANY ONE.*

1. What estimations are essential in the valuation of an oil cake? Describe fully the method for obtaining the percentage of albuminoid matter present in the cake.

2. What do you mean by the acid and iodine values of an oil? How would you find out whether an oil is of animal or of vegetable origin?

3. How would you analyze the percentages of different celluloses in a sample of wood?

## THIRD PAPER

### (Chemical Engineering)

Examiners— } PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
MR. A. T. WESTON, M.Sc., M.I.C.E., M.I.E.(LOND.)

*The questions are of equal value.*

### FIRST HALF

*Attempt ANY THREE of the following.*

1. Classify the various types of refrigerators, and describe fully the action of a mechanical refrigerator. Draw a neat pencil sketch of the machine, and explain the thermodynamical considerations underlying the same.

2. A compressed air motor is supplied with air at 90 lb. per sq. inch (absolute) and 65°F. The air is expanded according to the law,  $PV^{1.3} = \text{const.}$ , down to 15 lb. per square inch absolute, and exhausted at that pressure. Determine the quantity of air used in pounds per hour per indicated horsepower, and calculate the temperature of the exhaust air. Neglect losses due to clearance.

[N.B.—You may consult logarithmic tables.]

3. Describe with sketches what you know of—
- (a) Multiple effect evaporator ;
  - (b) Pelton Wheel ;
  - (c) D-slide valve ;
  - (d) Speed reducing gear.
4. What are the main characteristics of the plating dynamo? Give an account of the process of electroplating. Why has it been possible to electro-deposit rubber?
5. Explain what you know of the action of—
- (a) a commutator ; (b) an electrical transformer ; (c) a magneto.
6. Give the general layout of a modern sugar factory, explaining the processes involved at each stage.

## SECOND HALF

*Examiner*—MR. B. C. RAY, M.Sc.

*Answer ANY THREE of the following questions.*

1. Prepare a dimensional rough sketch of a steam-heated still suitable for producing 20 gallons of pure distilled water per day (8 hrs.). What metals would you use for the various components, and how much steam per hour would be required to operate it, assuming the transfer of heat to be theoretical?
2. What do you understand by the indicator diagram of a steam engine? State concisely how you would proceed to obtain the indicator diagram of a simple non-condensing steam engine, and what information you would obtain from it.
3. What types of Filtration plant would you employ for dealing with the following conditions?—
- (a) A large quantity of a neutral and easily filtrable sludge containing a relatively large proportion of solid matter.
  - (b) A moderately large quantity of a sludge containing a small quantity of solids but which tends to form a non-porous layer on the filter-cloth (e.g. a sugar solution containing activated carbon).
  - (c) The clarification of a liquid containing a very small quantity of solids (e.g. an oil or a varnish).
4. Name the typical classes of crushing and grinding machines on the market. State for what type of work each machine is suitable, and why. Give a detailed description with sketch of any one of them.
5. Make a layout for *any one* of the following:—
- (a) A model paint-making plant, from the crushing of the crude mineral colour to the finished liquid paint.
  - (b) A paper-mill.
  - (c) A cement factory.
-

FOURTH PAPER  
(Oil Technology)

*The questions are of equal value.*

FIRST HALF

Examiners— { DR. N. N. GODBOLE, M.A. B.Sc., PH.D. (BERLIN).  
                  ,, M. N. GOSWAMI, M.A., DR. ES. SC.

N.B.—Try ANY THREE of the following.

1. What do you know of the composition of crude petroleum? Show how the distilled products indicate the source. What considerations are involved in the manufacture of petrol?
2. Describe the manufacture of white oil from crude petroleum. What are its various uses?
3. What are the general chemical natures of the constituents of essential oils? What raw materials are available in India for their production?
4. Describe the manufacture of the following:—
  - (a) Coumarin.
  - (b) Phenyl acetic acid.
  - (c) Aldehyde,  $C_6$
  - (d) Artificial musk.
5. How do you propose to prepare the following?—
  - (a) Rose pomade.
  - (b) Soap stock from petroleum.
  - (c) White paraffin, m.p.  $50^{\circ}C$ .

SECOND HALF

Examiners— { DR. R. L. DATTA, D.Sc.  
                  ,, M. N. GOSWAMI, M.A., DR. ES. SC.

N.B.—Try ANY THREE of the following.

1. You are given an adulterated sample of butterfat. How would you proceed to examine it qualitatively and quantitatively?
2. Compare and discuss the merits and demerits of the manufacture of glycerine from (a) spent soap lye, and (b) split oils. How is it estimated? What are the prospects of this industry in Calcutta?
3. Write notes on any four of the following:—
  - (a) Estimation of salt in soap.
  - (b) Total fatty acids in soap and their estimation.
  - (c) Oxidation of oils.
  - (d) Composition of good washing soap.
  - (e) Determination of unsaturation in soap.
4. Discuss the French and German process for the saponification of oils and fats by caustic soda. Give a neat sketch of the apparatus used for dealing with ten maunds of oils.

5. What happens when—

- (a) castor oil is heated ;
- (b) butterfat is treated with glycerine and caustic potash and then steam-distilled after acidification.
- (c) mohua oil is boiled with sodium carbonate solution, washed, and then heated under pressure with mineral acid ;
- (d) olive oil is passed over heated, finely divided nickel ;
- (e) hempseed oil is heated with cobaltlinoleate?

#### FOURTH PAPER

#### (Silicates)

*The questions are of equal value.*

##### FIRST HALF

Examiners— { DR. H. N. BOSE.  
MR H. N. DASGUPTA, M.Sc.

*Attempt ANY THREE.*

1. Explain clearly the relation between enamel and glass. Can you use the same enamel on different metals? Give reasons for your answer.

2. What do you understand by the saying 'Pottery goods are a result of arrested reactions'? How do you differentiate between Porcelain, Stoneware, and Earthenware?

3. Describe the manufacture of white enamel, with special reference to the materials used. Explain how these materials produce opacity.

4. Explain the influences of lime and magnesia on refractory clays. What kind of refractory bricks would you recommend for the construction of the following in glass manufacture, and why?—

- (a) Tank furnace.
- (b) Pot furnace.
- (c) Annealing chamber.

5. Write notes on:—

- (a) Photoceramics ; (b) Segar Cones ; (c) Sorrels Cement ; (d) Hydraulic lime.

##### SECOND HALF

Examiners— { MR. L. GUPTA.  
,, M. K. SEN, M.Sc.  
,, H. N. DASGUPTA, M.Sc.

*Attempt ANY THREE.*

1. Classify the different kinds of glasses. What particular properties are considered when you decide to manufacture a typical kind of glass? What effects are brought about respectively by the addition of cobalt oxide,

cupric oxide, gold, silver, chromic oxide, manganese dioxide, and iron oxide, to a glass composition?

2. What is soluble glass? How do you proceed to manufacture it? State its properties and uses.

3. Describe the types of furnaces and pots used in the manufacture of glass, and specify the kind you would prefer to instal in India.

4. Write in detail the manufacture of Portland Cement, with special reference to the part played by the various constituents of cement in its chemical and physical properties. What do yo know of aluminous cements?

5. Describe how you would analyze a sample of soft glass.

## FOURTH PAPER

### (Fermentation)

*The questions are of equal value.*

#### FIRST HALF

Examiners— { PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
DR. B. C. GUPTA.  
MR. B. M. DAS, M.Sc.

*Only THREE questions are to be attempted.*

1. Give an account of the proteolytic enzymes, mentioning their application wherever significant.

2. Write notes on:—

- (a) Sørensen's Formal titration method;
- (b) Buffer systems;
- (c) van Slyke method of amino-group estimation.

3. What are Arginase and Urease? Give an account of their occurrence and importance.

4. (a) How is *emulsin* extracted for use? Describe any organic preparation of importance effected through its catalysis.

(b) Describe the manufacture of cheese, indicating the significant biochemical changes occurring in the process.

5. Make roughly dimensional sketches of the following:—

- (a) A septic tank.
- (b) An activated sludge plant.
- (c) A percolating sewage filter.
- (d) A mechanical waterworks filter.

6. Give an account of the chemical and biochemical transformations of cellulose.

How is pentose estimated in saw-dust?

## SECOND HALF

Examiners— { MR. P. B. SEN, M.Sc.  
DR. G. J. FOWLER

*Attempt only THREE questions.*

1. Describe the manufacture of acetone and butyl alcohol by bacterial fermentation. State the industrial uses of the various products of such fermentations.
  2. Write an essay on the industrial uses of moulds.
  3. Give an account, with sketch, of the azeotropic distillation of alcohol.
  4. Describe carefully how you would determine the number of bacteria present in: (a) 1 c.c. of drinking water; (b) 1 c.c. of sewage effluent; (c) one gram of soil.
  5. Discuss the chemical changes which take place when gelatine is submitted to the action of liquefying bacteria.
  6. Write a short essay on *one* of the following:—
    - (a) The occurrence, chemical composition, properties, and uses of Pectins.
    - (b) The various materials available in India which are suitable for paper-making.
    - (c) The composition and possible uses of molasses.
- 

## BOTANY

## FIRST PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

Examiners— { DR. P. N. GHATAK, M.Sc., Ph.D.  
„ S. N. DASGUPTA

*Answer THREE questions only, of which the FIRST ONE is compulsory.*

1. What is Heterothallism? Discuss its bearing on the problem of sex in Fungi. 18
2. Write a critical note on the rôle of chemicals on the nutrition of Fungi. 16
3. What are the distinguishing characters of the Ascomycetes? Give the details of classification of the group as given by Gwynne-Vaughan, and enumerate the principal characters on which it is based. 16
4. Write a short note on the effect of bacterial infection on the host plants. 16
5. Describe the Rust diseases of Wheat in Northern India and their means of control. 16

## SECOND HALF

Examiners— { DR. M. O. P. AYYANGAR, M.A., L.T., PH.D.  
 „ S. HEDAYETULLAH, M.Sc., PH.D.

Answer Question 1 and any other TWO

1. Give a general review of the parallelism in evolution of the Plant-body types among the classes of Algæ with known flagellated unicells. What are the main evolutionary lines or tendencies from the motile unicells towards the evolution of Plant-body types among the Algæ 18
2. Describe the sexual reproduction of *Rhodophyceæ*. Discuss briefly their relationship with other Algæ. 16
3. Discuss the nature of the alternation of generations discovered in different genera of the *Chlorophyceæ*, and state briefly how far their discovery has solved the problems connected with any attempt to derive *Archegoniates* from the *Chlorophyceæ*.
4. Give the general characters of the order *Jungermanniales*, and discuss their affinities with the other orders of Bryophyta. 16
5. Which group of Bryophyta do you regard to be the most highly evolved? Discuss your reasons.

## SECOND PAPER

## FIRST HALF

Examiner—DR. P. K. DASGUPTA, M.Sc., PH.D.

*The figures in the margin indicate full marks.*

THREE questions are to be attempted, of which Question 1 is compulsory. Answers are always to be illustrated with examples and drawings.

1. Write an essay on any one of the following subjects:— 20
  - (a) The evolutionary importance of Selaginella in the vegetable kingdom.
  - (b) The Protocorm Theory and its present position.
  - (c) Biological significance of the alternation of generations.
2. Describe in detail the structure and life-history of a member of the Isoetaceæ, and discuss the systematic position of the group. 15
3. Write short notes on the theories of— 15
  - (a) migration, (b) interpolation, and (c) sterilization.
4. Give a detailed comparative account of the resemblances and differences between Selaginella and an Angiosperm as regards the (a) gametophytic generation, (b) the process of fertilization, and (c) feeding of the embryo. How do you account for these resemblances and differences? 15
5. What is a spore? Indicate in what respects a spore (a) resembles, and (b) differs from, a seed. Why is seed not found in vascular cryptogams? 15



## SECOND HALF

Examiner—MR. G. P. MAJUMDAR, M.Sc.

*Illustrate your answers by neat sketches wherever necessary.*

*Answer ANY THREE questions.*

1. Give an account of either *Cordaites* or any member of the *Pteridospermæ*, pointing out the importance or interest of the group in relation to recent plants.
  2. Discuss the systematic position of the *Gnetaceæ*, pointing out the characters in which most resemble the Angiosperms.
  3. Write short notes on : *Zamia*, *Cycadeoidea*, *Dadoxylon*, *Araucaria*, *Cryptomeria*.
  4. Discuss the views held regarding the morphology of the female cone of the *Coniferæ*.
  5. Write a short essay on the phylogenetic relationships of the *Gymnosperms*.
- 

## THIRD PAPER

*The questions are of equal value.*

## FIRST HALF

Examiner—MR. S. C. BANERJEE, M.Sc.

1. Give a brief account of the floral morphology of the genus *Podostemon*.
  2. Indicate, with the help of floral diagrams, the differences between the sub-orders of *Scitamineæ* according to Bentham and Hooker's system.
- Or,*
3. What are the main arguments of Hutchinson in support of monophyletic origin of the Monocotyledons?
  4. Discuss the causes of the varied nature of the Flora of the Khasi Hills.

*Or,*

5. Explain what you understand by the expression 'Alpine Himalaya', and mention the genus marking tree-limit.

## SECOND HALF

Examiner—MR. K. P. BISWAS, M.Sc.

*Answer ANY THREE questions.*

*Illustrate your answer by neat sketches wherever necessary.*

1. Write a short essay on the Concept of Species in plants.

2. Write short notes on *any five* of the following, mentioning the Families to which they belong and giving their geographical distribution :—

Typha, Borassus, Asparagus, Casuarina, Santalum, Anacardium, Avicennia, Utricularia.

3. Describe the floral structure and discuss the affinities of *any two* of the following :—

Palmae, Chenopodiaceae, Asclepiadeae.

4. Give the general characters of *either* the Sterculiaceae or the Rubiaceae. Mention the characters on which the sub-divisions of the Family selected by you are based, and name some species of economic, medicinal, or biological value belonging to it.

5. *Either,*

Write a short essay on the geographico-botanical divisions of India.

*Or,*

Describe the sequence of vegetation generally met with on the margin of a permanent freshwater lake, and show how each species is adapted to its position.

#### FOURTH PAPER

*The questions are of equal value.*

##### FIRST HALF

*Examiner*—DR. J. C. SENGUPTA, M.Sc., Ph.D.

*Answer THREE questions only.*

1. What is transpiration, and how is it regulated? Comment briefly on the different methods of its determination and the expression of the results.

2. Describe with their chemical aspects the different modes of nitrogen metabolism found in the different plants.

3. Describe the chemical process of Photosynthesis, and give a brief account of the Carbohydrates with their occurrence and variations in plants.

4. How does Growth take place in plants? Describe its distribution in different plant organs.

5. What are autonomous movements? Mention the chief ones, and indicate how far they have been analyzed.

##### SECOND HALF

*Examiner*—PROF. S. C. MAHALANABIS, B.Sc., F.R.S.E.

*Answer only THREE questions.*

1. How does new soil arise? Discuss the various stages of development and character of vegetation on new soil.

2. Describe the characteristics of (a) the soil, and (b) the vegetation, of an Indian forest.

3. Expound the 'Presence and Absence Theory', and explain how it offers a clue as to how various domesticated plants have arisen from their wild prototypes.

4. Give a brief account of de Vries' 'Mutation Theory'.

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### FIFTH PAPER (A)

#### (Morphology)

*The questions are of equal value.*

#### FIRST HALF

*Examiner*—MR. S. C. BANERJEE, M.Sc.

1. Give a detailed account of the germination of Maize.
2. A leaf is developed from a leaf-primordium situated laterally close to the growing point of a shoot-axis. Are there exceptions to this morphological dogma?

*Or,*

3. Adduce evidence in support of the leaf-nature of Cotyledon.
4. Discuss the nature of the inflorescence of Fig.

*Or,*

5. Give a detailed account of the morphology of insectivorous plants involving movement in the capturing mechanism.

#### SECOND HALF

*Examiner*—DR. P. MAHESWARI

*Answer ANY THREE questions only.*

1. Give an account of the development of the female gametophyte in the following types: (i) *Plumbagella*, (ii) *Peperomia*, and (iii) *Lilium*.
2. Give a detailed account of the mode of germination of seeds enclosed in a stony endocarp.
3. Give a comprehensive account of the origin of angiospermic flower.
4. Trace the gradual complexity in the nature of the inflorescence from the most simple type.
5. Give a comprehensive account of new formation of organs in regeneration.

## FIFTH PAPER SPECIAL (B)

**(Cytology)**

*The figures in the margin indicate full marks.*

## FIRST HALF

*Examiner*—DR. S. HEDAYETULLAH, M.Sc. PH.D.

*Answer ANY TWO questions.*

1. Write an essay on the vegetable nucleus. 25
2. Discuss the structure of the chromosomes during the various phases of mitotic cycle. 25
3. State briefly how the cytological study of chromosomes has helped us in understanding the Mendelian heredity and Evolution. 25

## SECOND HALF

*Examiner*—DR. K. D. BAGCHI, D.Sc.(LOND.)

*Answer ANY TWO questions.*

1. Write short explanatory notes with examples of the following cytological terms :— 25  
*heteroploid, polyploid, anenploid, autoheteroploid, and alloheteroploid.*
2. Discuss the cytological aspect of *Alternation of Generations* in different groups of plants. 25
3. What is *chiasma*? Discuss the theories advanced with regard to the origin of the *chiasma*. What is its significance in *meiosis*? 25

## FIFTH PAPER SPECIAL (C)

**(Economic Botany)**

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. J. BANERJI, M.Sc.

1. Give an account of the distribution of the cotton crop in India. What are the species of cotton grown, and on what characters of the plant does the yield of the fibre depend?
2. *Either,*  
 Give a general account of the distribution and cultivation of the sugar-cane crop in India, and write a note on the recent researches on the genetics of the crop.

Or,

What is the difference between Para rubber and Ceara rubber? Mention all the rubber yielding plants, and give an account of the mode of cultivation and the different processes of extraction of the latex from *Hevea brasiliensis* Müll. Arg.

## SECOND HALF

Examiner—MR. S. N. BAL

1. Mention three vegetable and two fruit plants which can be profitably grown near or about big cities. What would be the methods used for growing these? Enumerate the yield of each of the crops you propose to grow per acre.

2.

Either,

Write short notes on the medicinal importance of the following plants : —

- (i) *Aegle Marmelos* Corr.
- (ii) *Boerhaavia diffusa* L.
- (iii) *Crocus sativus* L.
- (iv) *Hernandimus indicus* Br.
- (v) *Holarrhena antidysenterica* W.
- (vi) *Papaver somniferum* L.
- (vii) *Plantago ovata* Forsk.
- (viii) *Podophyllum Emodi* Wall.

Or,

What do you know about 'Chaulmoogra oil'? From what plant and from what part of the plant is the oil derived? Do you know of any other allied plants which yield an oil almost like 'Chaulmoogra'? What are they and in which part of India and Burma are they abundantly found?

3.

Either,

What are the timbers found in India that are utilized for the manufacture of match boxes and sticks. State the distribution of these plants and the parts they play in the manufacture of the finished products.

Or,

Give the distribution of *Shorea robusta* Gartn. and *Tectona grandis* L. in India and Burma. Enumerate the properties and uses of the timbers of both in detail.

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## PHYSIOLOGY

## FIRST PAPER

Examiners— { SIR NILRATAN SIRCAR, Kt., M.A., M.D.,  
 DR. B. B. SARKAR, D.Sc. Ph.D., LL.D., D.C.L.  
 MR. N. C. BHATTACHARYA, M.A.

*The questions are of equal value.*

*Candidates are required to answer only FOUR questions.*

1. Give a detailed account of the Sinus Caroticus, and discuss its influence on the regulation of circulation and respiration.
2. Give an account of the various organs that take part in the formation and destruction of the corpuscles of blood.
3. Describe the various experiments that have been recently performed to elucidate the function of the kidneys. Discuss in detail the most plausible theory regarding the formation of urine.
4. Give a detailed account of the movements of the small intestine and the factors that influence these movements.
5. Discuss the chief physical factors in cardiac adaptation, compensation, and de-compensation.
6. Give an account of the effects of Oxygen deficiency on respiration.

## SECOND PAPER

Examiners— { SIR UPENDRANATH BRAHMACHARI, Kt., M.A., M.D.,  
 MR. N. M. BOSE, M.Sc. Ph.D., F.A.S.B. RAI BAHADUR  
 „ P. B. SEN, M.Sc.

*The questions are of equal value.*

*Not more than THREE questions are to be attempted. Questions 3 and 4 are compulsory.*

I. Discuss the nature of the cell-membrane, with special reference to its permeability, and explain as clearly as you can the difference in ionic concentrations between the inside and the outside of a living cell.

*Or,*

2. Give an account of any method of determination of  $H^+$  ion concentration of a fluid, and write what you know about the preservation of neutrality in the organism.

3. Discuss the different types of specificity of enzymes, and explain how the specific behaviour of pepsin, trypsin, and erepsin throws light on the structure of proteins.

4. Give an account of the recent work on the chemistry of sterols and bile acids.

## THIRD PAPER

Examiners— { PROF. W. BURRIDGE, M.A.  
MR. S. M. BANERJI, M.Sc., M.B.  
DR. B. B. SARKAR, D.Sc.

*The questions are of equal value.*

*Answer only FOUR questions.*

1. Give an account of the phenomena of light and dark adaptation. What explanations can you offer concerning causes?
2. Review the evidence that the endocrine organs can influence our mental functions. Suggest means by which this influence may be exerted.
3. Explain, as far as possible, the general features exhibited by reflex action with special reference to the recent conception of the central state, modifying the behaviour of the motoneurone to reflex excitation.
4. Write notes on :—
  - (a) Calorigenic action of Adrenalin and its effect on the Carbohydrate metabolism in general.
  - (b) Mode of action of Parathormone.
  - (c) Recent work on the internal secretion of the Suprarenal Cortex.
5. Discuss in detail the Extinction and Inhibition of conditioned reflexes.
6. Give a detailed account of the various functions of the posterior Pituitary gland. How do some of its actions compare with those of Adrenalin?

## FOURTH PAPER

Examiners— { LT.-COL. A. C. MAC GILCHRIST, M.A., D.Sc., M.D., F.R.C.P.  
PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
MR. S. M. BANERJI, M.Sc. M.B.

*The questions are of equal value.*

*Answer only FOUR questions.*

1. Describe the position and nature of the end-organs for *labyrinthine sensations*. How have the effect and value of impulses from these organs been established?
2. Describe the reflex actions of the Iris, giving the reflex arc in each case.
3. Trace the course of olfactory impulses from the nasal mucosa to the brain. Discuss the importance of the olfactory sense.
4. Describe the organ of Corti, and discuss how it is possible for this apparatus to analyze sound. Give reasons in support of your answer.
5. Discuss, in detail, the various changes which occur in a nerve fibre during and after passage of a nerve impulse, laying special stress on the electrical variations and explanations thereof.

6. Write notes on—

- (a) Duplicity theory of Parinaud and v. Kries.
- (b) Theories to explain simultaneous contrast.
- (c) Compensation of the cochlea.

## FIFTH PAPER

### (Special)

Examiners— { Mr. P. B. SEN, M.Sc.  
 „ N. C. BHATTACHARYYA, M.A.  
 N. M. BOSE, M.Sc.

*The questions are of equal value.*

ANY FOUR questions are to be answered.

1. Discuss the theories of oxidation of food stuffs in the animal body.
2. Discuss the rôle and metabolism in the body of Calcium, Phosphorus, and Iron.
3. Describe fully the rôle of Tyrosine as an essential amino acid, and indicate its relation to various biochemical substances.
4. Write an essay on Creatinine Metabolism.
5. Write an account of the various investigations that have been made to find out the Protein Minimum for the human body.
6. Give an account of the formation of carbohydrate in the body under different conditions of health, disease, and starvation.

## ZOOLOGY

### FIRST PAPER

*The questions are of equal value.*

#### FIRST HALF

Examiners— { Mr. J. L. BHADURI, M.Sc.  
 Prof. R. GOPAL AIYAR, M.A., M.Sc.

*Attempt ANY THREE only.*

1. It is said that 'one of the most important factors in bringing about divergent evolution is Isolation'. Explain.
2. Give an account of the fauna of Madagascar. Compare it with that of S. Africa. How would you account for the several peculiar features of the fauna?
8. What is extinction? State and discuss briefly the causes of extinction.



4. Write what you know about fossil and fossilization.
5. Write short notes on *any three* of the following:—
  - (a) Discontinuous distribution; (b) de Vries; (c) Panmixia; (d) Orthogenesis; (e) Archaeopteryx.

## SECOND HALF

Examiners—  $\left\{ \begin{array}{l} \text{MR. D. MOOKERJEE, M.Sc.} \\ \text{DR. B. PRASAD, D.Sc.} \end{array} \right.$

Write an essay on *any one* of the following:—

- (a) The origin and relationship of Mammals.
- (b) The Recapitulation Theory.
- (c) The Freshwater Fauna.
- (d) Importance of the study of Zoology in connection with Medical Research.

## SECOND PAPER

## FIRST HALF

Examiners—  $\left\{ \begin{array}{l} \text{DR. H. N. RAY, M.Sc., PH.D.} \\ \text{PROF. A. B. MISRA, D.Sc., D.PHIL.} \end{array} \right.$

*The questions are of equal value.*

*Attempt ANY THREE questions.*

1. What do you understand by maturation of germ-cells? Explain this by means of examples.
2. State briefly the rôle of cytoplasm in development and heredity.

*Or,*

Write what you know about artificial parthenogenesis.

3. Give a comparative account of the histology of skin representing the different classes of Vertebrates.
4. Give an account of some of the recent investigations made upon Genes. Are these demonstrable units?
5. Expand the idea contained in the following excerpt: 'Great as has been the advance in our knowledge of the inheritance of characters through breeding experiments conducted on Mendelian lines, there is some danger of the factorial theory becoming a mere formal explanation of results'.

## SECOND HALF

Examiners—  $\left\{ \begin{array}{l} \text{PROF. H. K. MOOKERJEE, D.Sc., D.I.C.} \\ \text{PROF. K. N. BAHL, D.Sc., PHIL.} \end{array} \right.$

*The figures in the margin indicate full marks.*

**N.B.**—Answer ANY TWO questions.

1. Describe the development of a trunk somite in a vertebrate, and trace the development of structures that are derived from a somite. 25

2. Give a detailed account of the development of the kidney in a vertebrate. 25
3. Describe the results of experimental analysis of the metamorphosis in Amphibia. 25
4. Describe the development of a vertebrate eye. 25
5. Discuss the origin and development of the placenta in Mammalia. 25

### THIRD PAPER

*The questions are of equal value.*

#### FIRST HALF

Examiner—DR. H. N. RAY, M.Sc., PH.D.

*Attempt ANY THREE questions.*

*Full Marks—50*

1. Compare the life-history of a Gregarine with that of a Coccidian.

*Or,*

Give a comparative account of the life-histories of *Trypanosoma lewisi* and *Trypanosoma gambiense*.

2. Describe the methods of reproduction and skeleton formation in Actinozoa.
3. Give the morphology and bionomics of any Trematode known to you, and indicate the changes brought about in the parasite due to its parasitic habit.
4. Discuss the systematic position of the Porifera in the Animal Kingdom.
5. Give a comparative account of the parts that subserve respiration in the Annelida.

#### SECOND HALF

Examiners— { MR. D. MUKHERJEE, M.Sc.  
PROF. A. B. MISRA, D.Sc., D.PHIL.

*Attempt ANY THREE questions.*

*Full Marks—50*

1. Enumerate the distinctive characters of the Annulata, and classify the Polychæta and Oligochæta, giving the Ordinal characters and examples.
2. Write an essay on Degeneration due to Parasitism, illustrating it with reference to Crustacea.
3. Give a full account of any four of the following:—
  - (a) Glochidium larva.
  - (b) Byssus gland of *Mytilus*.

- (c) Sex-reversal in *Ostrea*.
  - (d) Eye of *Pecten*.
  - (e) Ink-gland of *Sepia*.
  - (f) Sucker on the arm of *Loligo*.
4. Discuss the phylogenetic affinities of *Peripatus*.
  5. Describe the structure of compound eyes in Arthropoda.
- 

## FOURTH PAPER

## FIRST HALF

Examiner--PROF. H. K. MOOKERJEE, D.Sc., D.I.C.

*The figures in the margin indicate full marks.*

*Attempt ANY TWO questions.*

- |  |    |
|--|----|
| 1. Show the retrogressive metamorphosis in any Tunicata.           | 25 |
| 2. Discuss the position of Amphioxus in Chordata.                  | 25 |
| 3. Give a general account of the cutaneous sense organs in Fishes. | 25 |
| 4. Give a comparative account of the pectoral girdle in Fishes.    | 25 |
| 5. Discuss the probable origin of the Amphibia.                    | 25 |

## SECOND HALF

Examiners—  $\left\{ \begin{array}{l} \text{MR. G. K. CHAKRABARTI, M.Sc.} \\ \text{PROF. R. GOPAL AIYAR, M.A., M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Attempt ANY THREE of the following.*

1. What are the archaic features in the Monotremes? Discuss the position of the Monotremes amongst the Mammals.
2. Give an account of the evolution of the ear-ossicles in the Mammals.
3. Give a comparative account of the parietal organ in Reptiles, and discuss its functions.
4. What do you know of Reptilian life in deserts?
5. Give an account of migration in Birds. State briefly how such studies are carried out in Europe.

## EXPERIMENTAL PSYCHOLOGY

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. G. PAL, M.Sc.

*Attempt ANY THREE questions.*

1. Explain carefully *any two* of the following :—

(1) Physiological psychology of *after image*, (2) dark adaptation, and (3) photo-chemistry of vision.

2. Discuss fully the function of the labyrinthine organ or the cerebellum.

3. Give a concise account of the function of involuntary nervous system in man, pointing out the inter-relation of the 'thoracico-lumber' and the 'cranio-sacral' divisions as also the autacoids. What do you understand by the expression 'chemical transmission of the nervous impulse'?

4. Explain carefully what you understand by the following terms: (a) 'delayed conditioned reflex', (b) internal inhibition by extinction, (c) conditioned inhibition, (d) differential inhibition, (e) inhibition of inhibition, and (f) summation and irradiation.

5. Discuss the rationale and technique of Psychogalvanic experiments.

## SECOND HALF

*Examiner*—DR. S. C. MITRA, M.A., D.Phil.

*Only THREE questions to be answered.*

1. Discuss how far the various types of *Geometrical-Optical illusions* can be explained in terms of the *Genetic* and *Nativistic* theories of space perception.

2. Discuss whether Memory can be adequately defined as a '*phenomenon of perseveration of impressions under the conditions of central excitation*'. Discuss the evidence on which the view rests.

3. Write a critical note on the *theory of Meaning* as advanced by the Structural school. Discuss the evidence for and against the theory.

4. Bring out the difference between the (i) Behaviouristic account and (ii) James-Lange theory of emotion. Preface your answer with brief sketches of both the views.

5. Give a brief account of the nature of Voluntary action *strictly* in the light of the data of experiments. Consider in what respects such an account seems inadequate.

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## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—MR. B. C. GHOSH, M.A., M.B.Ch.B.

*Try ANY THREE questions.*

1. Examine the psychogenetic theories of *sleep, hallucinations, and suggestion.*
2. Discuss the nature of *disposition, temper, and temperament* as hereditary but modifiable factors of personality.
3. Discuss the constitutional bases of the temperamental types of Jung.
4. Describe Schizoid and Cycloid personalities, and account for their morbid developments.
5. Give a resumé of the Monadic theory of personality.

## SECOND HALF

*Examiner*—DR. G. S. BOSE, D.Sc., M.B.

*Try ANY THREE questions.*

1. Examine critically the peculiarities of hypnotic phenomena so as to develop a theory about the 'structure' of the mind.
  2. Contrast a typical case of Conversion Hysteria with one of Obsession Neurosis so as to bring out the characteristic differences between them.
  3. Discuss the genesis of Homosexuality. How is it related to the Oedipus Complex?
  4. Delineate the essential principles of Psychoanalytical therapy, and discuss how far it is open to the charge of using Suggestion.
  5. Write short notes on *any two* :—
    - (a) Difference between anxiety-hysteria and anxiety-neurosis.
    - (b) Dream symbolism.
    - (c) The theory of the opposite wish.
- 

## THIRD PAPER

## FIRST HALF

*Examiner*—MR. M. N. BANERJEE, M.Sc.

*The questions are of equal value.*

*Answer ANY THREE questions.*

1. What would you accept as the criteria of consciousness? Give reasons for your answer, and support your statements with concrete illustrations.

2. Summarize the results of the various experiments of Hess and others on the colour discrimination of fishes. Critically discuss the principles and techniques of these investigations.

3. Write notes on *any four* of the following :—

- (a) Chordotonal Organ.
- (b) Lateral Line Canal.
- (c) Otolith.
- (d) Compound Eye.
- (e) Asexual Reproduction.
- (f) Pigment Spot in micro-organism.

4. Discuss the question of *memory* in animals, fully explaining what you understand by the term 'memory'.

5. Give sufficient concrete illustrations of (a) Mutual Understanding and Imitation, (b) Mutual Help and Mutual Harm in the Social Life of animals.

#### SECOND HALF

*Examiner*—PROF. H. D. BHATTACHARYYA, M.A.

*The figures in the margin indicate full marks.*

*Answer Question 1 and ANY TWO of the remaining four.*

1. Develop *any two* of the following propositions of Köhler with suitable reference to facts :— 20

(a) Nothing in the behaviour of the animal arises from the beginning out of the relation of the several constituent parts of the situation to each other; the structure of the situation in itself has no power whatever directly to determine conduct appropriate to it.

(b) To understand the capacities and mistakes of chimpanzees in visually given situations is quite impossible without a theory of visual functions, especially of shapes in space.

(c) It is most difficult for chimpanzees to imitate anything, unless they themselves understand it.

2. What elements of animal psychology have the Behaviourists utilized in building up their objective psychology, and with what results and justification? 15

Or,

Trace the operation of a typical instinct in men and animals, indicating the differences, if any, and their etiology.

3. Distinguish the principles of interpreting the minds of higher animals as adopted by Hobhouse, Lloyd Morgan, Holmes, and Köhler, and discuss their relative merits. 15

4. Write a short essay *either* on the moral sense of animals *or* on their æsthetic sense, giving reference to facts and theories in either case. 15

5. To what extent are higher animals capable of generalized thought? Does learning by experience necessarily imply any power of generalization? Discuss the question thoroughly in the light of experimental data. 15

## FOURTH PAPER

*The questions are of equal value.*

## FIRST HALF

*Examiner*—DR. S. RAY, M.A., B.D., PH.D.

*Attempt ANY THREE questions.*

1. Why do the present day child psychologists concentrate their energies more on perfecting their technique than on obtaining results? In this connection examine critically the work done by Arnold Gesell in his study of the Developmental Psychology of Twins.

2. Describe briefly Kirkpatrick's view of the development of social instincts. How does his view differ from that of a psychologist of the newer school as represented by John B. Watson or Susan Isaacs?

3. Discuss the theories of Recapitulation, Utility, and Correspondence, and state your own view as to the probable correctness of any one of these. Are you familiar with any other similar theory? If so, discuss it briefly.

4. What are the normal types of social behaviour of children studied by Charlotte Bühler? Review critically the implications of social behaviour in relation to institutional conditions.

5. How do children express themselves through visual symbols and drawings? Criticize the results obtained by Florence Goodenough in her study of Children's Drawings.

*Or,*

Criticize the following statement made by Knight Dunlap: 'Child psychology . . . Some, like N. Norsworthy and M. Whitby: The Psychology of childhood; are accumulations of conjectures and hoary superstitions concerning the "child mind" of no practical usefulness.'

6. Describe and criticize a few representative experiments of the Gestalt school as reported by Koffka and Köhler. Have these experiments opened a new field for investigation in child psychology? What is insight?

## SECOND HALF

*Examiner*—MR. H. P. MAITI, M.A.

*Answer ANY THREE questions.*

1. (a) Discuss the 'multi-factor theory' and the 'two-factor theory' of intelligence.

(b) What evidence is there that the intelligence test is not a measure of the effect of schooling and other environmental factors?

2. Explain 'transfer of training' and 'formal discipline'.

What are the outstanding experiments in the transfer of training? What are the educational implications of the experimental findings?

3. (a) State and criticize the principle of 'trial and error' in learning.

(b) Examine some of the new concepts that Thorndike has recently postulated to explain human learning.

4. (a) What are the different methods of measurement of moral behaviour in children?

(b) How do you diagnose feeble-mindedness in a child?

What should be the aim in educating a feeble-minded child?

5. Write short notes on *any four* of the following :—

- (i) Constitution of arithmetical ability.
- (ii) Psychological basis of spelling.
- (iii) Accomplishment quotient.
- (iv) Semi-interquartile range.
- (v) Montessori system.
- (vi) Personality traits.

## GEOLOGY

### FIRST PAPER

Examiners— { Mr. K. K. SENGUPTA, M.A., B.Sc., F.G.S.  
 „ N. N. CHATTERJEE, M.Sc.  
 Dr. M. S. KRISHNAN, M.A., A.R.C.S., PH.D.

*Answer ANY SIX questions.*

*The questions are of equal value.*

1. Distinguish between detrital deposits and placers, and describe the different types of useful minerals found in these. How would you proceed to examine the deposits for their precious metal contents? What precious metal values would make a deposit remunerative to work at present?

2. Describe the present state of affairs of the proposed coal restriction plan. What course of action would you advocate for settling this problem? Give your reasons.

3. Discuss the different factors which have to be taken into account in the valuation of a metalliferous mineral deposit. Illustrate your answer with a deposit containing lead and zinc as the chief metals.

4. Describe the deposits of barytes in India. What are the impurities associated with them? Give the specifications and market quotations for the mineral and the uses to which it is put.

5. Describe the copper ores of India, and mention their mineral associates and chemical impurities. What is the minimum percentage of the metal which will permit of its treatment and extraction? In what form is copper consumed in India?

6. What are the chief types of glasses produced at the present time, and what are their ingredients? Examine the sources of glass-making materials in India and the prospects for the manufacture of the different types in India.

7. Discuss the origin of petroleum, and describe the geological conditions favourable for its accumulation.

8. What are the important properties which should be present in coke suitable for blast furnaces? Which coal seams in Bengal and Bihar are best suited for the manufacture of metallurgical coke? Describe a modern coke-oven and its products, mentioning a few places where such ovens are working in India.

9. Give a short account of the various theories regarding the origin of mineral veins.

10. Write what you know about 'secondary enrichment' of ores. Illustrate your answer with reference to copper, silver, and zinc deposits.



## SECOND PAPER

Examiners— { MR. S. L. BISWAS, M.Sc.  
 „ W. D. WEST, M.A.(CANTAB)

*The figures in the margin indicate full marks.*

*Answer six questions only.*

1. Discuss the metamorphic conditions which prevail in the *epi*, *meso*, and *kata* zones, and describe the chief mineral assemblages that are likely to be found in argillaceous rocks subjected to each of these three grades of metamorphism. 16
2. Describe the Deccan Trap of Kathiawar, contrasting it with the Deccan Trap of other parts of India. 16
3. Describe the characteristics of Mica-pegmatites of India. Discuss their origin. 16
4. Discuss the following: (a) petrographic province, (b) stress and anti-stress minerals, (c) migmatite, (d) palagonitisation. 20
5. Give a summarized account of the modern conception of the internal structure of crystals. Deduce the law of rationality of indices. 16
6. Explain clearly the Becke's method of determining the refractive indices of minerals. 16
7. What do you know of the nature of colloids? Discuss their importance in the formations of minerals and rocks. 16
8. Describe the characteristic features of the meteorites, and give their classification. 16

## THIRD PAPER

Examiners— { DR. M. CHATTERJEE, M.Sc., PH.D.  
 „ CYRIL S. FOX, D.Sc.

*The questions are of equal value.*

*ANY FIVE questions may be answered.*

1. Discuss very briefly the main geological characteristics—Age; Lithology; Fauna and Flora, and mode of Formation of—
  - (a) the Talchir boulder bed;
  - (b) the Raniganj series;
  - (c) the Sylhet limestone; and
  - (d) the Saline series.
2. Describe as simply and clearly as possible the essential petrological, structural, and geographical particulars of—
  - (a) the Aravalli system;
  - (b) the Vindhyan system;
  - (c) the Cuddapah system; and
  - (d) the Dharwar system.

3. Compare the Carboniferous succession of Kashmir with that of Spiti, and discuss in this connection the age and duration of the Panjal Traps.

4. State the chief sub-divisions of the Gondwana system in India. Give the European equivalent of each stage. Discuss briefly the age and fauna and distribution of the Productus sea over Southern Asia—chiefly in connection with the shore lines of the great Gondwana continent of that period.

5. Write a short account of the changes (a) in Climate; (b) in Fauna and Flora; and (c) distribution of Land and Sea—in the Indian region—in the period from the close of the Permian to the beginning of the Jurassic.

6. Discuss briefly the probable geological age of the outpouring of the Deccan basaltic lavas in India from the evidence of the following exposures:—

- (a) around Rajamundry in the Madras country;
- (b) the Satpura and Nerbada region;
- (c) near Surat and in Cutch; and
- (d) the Laki range in Sind.

7. Write as fully as you can of the geological history of the region of the Madras coast, Bengal and Assam from the close of the Cretaceous period to the present day. Deal in particular with the evolution of the Bay of Bengal in this question.

#### FOURTH PAPER

Examiners— { DR. M. CHATTERJEE, M.Sc., PH.D.  
MR. S. L. BISWAS, M.Sc.  
DR. M. R. SAHNI, D.Sc.

*The questions are of equal value.*

*Answer TWO questions from Group A and THREE from Group B, of which Question 4 is compulsory.*

#### GROUP A

1. Write a critical essay on Wegner's theory of Continental Drifts.
2. Give an account of the stages in the formation of mountain ranges. Discuss this with regard to the Himalaya Mountains.
3. Discuss the nature and origin of climatic changes during the past geological history of the earth.

#### GROUP B

4. Give a comparative account of the vertebrate faunas of the different sub-divisions of the Siwalik System.
5. Give the geological history of ammonites, and discuss their stratigraphical importance.
6. Give the systematic position, range in time, and the geographical distribution of the following: *Avicula contorta*, *Atrypa reticularis*, *Eurydesma*, *Hungarites*, *Oldhamia*, *Gangamopteris*, *Mastodon*, *Trachyceras*, *Estheria*, and *Euomphalus*.

7. What are the principal pre-tertiary plant bearing formations in India? Give an account of the flora of each formation.

8. Discuss the influence of environment on the structure of organisms, giving examples from various fossil groups.

## FIFTH PAPER

### (Igneous Rocks)

Examiners  $\left\{ \begin{array}{l} \text{MR. S. L. BISWAS, M.Sc.} \\ \text{DR. P. K. GHOSH, M.Sc., PH.D., D.Sc., D.I.C.} \end{array} \right.$

*Answer ANY FOUR of the following questions.*

*The questions are of equal value.*

1. Describe the physical phenomena associated with the intrusion and consolidation of a granite-magma.

Discuss how they throw light on the mode of emplacement of the granite and its tectonic history.

2. Give a brief account of the distribution, in India and elsewhere, of the Charnockite series.

Discuss the theories put forward to account for the origin and the mineralogical and other peculiarities of these rocks.

3. Give a systematic account of the various types of igneous activity during the pre-Cambrian times in India.

Name the chief mineral deposits of economic importance associated with the respective types of igneous activity of this period.

4. What are alkaline rocks?

Discuss their origin.

Name the chief Indian types.

5. Discuss the importance of chemical analysis in the study of igneous rocks.

6. Give a critical account of the origin and distribution of Anorthosites.

## FIFTH PAPER

### (Coal)

Examiners—  $\left\{ \begin{array}{l} \text{MR. N. N. CHATTERJEE, M.Sc.} \\ \text{DR. CYRIL S. FOX, DSc.} \end{array} \right.$

*The questions are of equal value.*

*Attempt ANY FIVE questions.*

1. Enumerate the geological succession of strata in India in which workable coal seams occur. Name the varieties of coals that are found

in Rajputana, Khasi Hills, and Jammu. Enumerate the characteristic features of these coals.

2. How will you proceed to make an accurate determination of Carbon, Hydrogen, Moisture, and Volatile matter? Mention the possible sources of error.

3. Write a brief account of the Raniganj coalfield. Give some idea about the correlation of the different coal seams.

4. Explain fully what you understand by Low Temperature Carbonization. Give an account of the products of low temperature carbonization in case of good quality Jharia coals.

5. State briefly how you would proceed to make a polished surface of coal for examination by reflected light. Give an account of the microstructures as found in some Indian coals.

6. Write very brief notes on the following:—

- (i) Dopplerite; (ii) Fusain; (iii) The Sulphur in coal; (iv) Hydrogenation; (v) Coal Tar and Pitch; (vi) Coal-Oil Fuel.

7. Write a short essay on pulverised coal as fuel and its possible future in India. Give the names of two places where coal is successfully used in pulverised condition. What precautions are needed for safe storage of powdered coal?

## ANTHROPOLOGY

### FIRST PAPER

*The questions are of equal value.*

#### FIRST HALF

*Examiner—MR. A. N. CHATTERJEE, M.B., B.S.*

1. Write what you know about the dental system of the chimpanzee.

*Or,*

Assess the position of Sivapithecus (Pilgrim) in the Primate series.

2. In what features has the human skull departed further from the generalized type than the crania of Simiida?

*Or,*

Write a short note on the general anatomy of Leumuroidea.

3. Write a dissertation on 'The morphological aspects of Anthropology—its scope—limitations and methods'.

*Or,*

State the nature of the contributions made to Physical Anthropology by—

- (1) Huxley;
- (2) Lamarck;
- (3) Galton;
- (4) Eugen Fischer;
- (5) Broca;
- (6) Boule;
- (7) Davidson Black;
- (8) Virchow.

## SECOND HALF

*Examiner—MR. M. N. BOSE, M.A., C.M.*

*Answer ANY THREE.*

1. Write what you know about *Pithecanthropus Erectus*.
2. Write short notes on: (a) Kanam-Kanjera finds, (b) Strandloopers, (c) Ehringsdorf jaw, (d) Oldoway skull, (e) Ho-nan sacrum.
3. What morphological proofs can you advance to show that Rhodesian man belonged to a different type from the Neanderthals of Europe?
4. Compare the lower jaw found at Mauer with that of *Sinanthropus*.

*Or,*

Write what you know about the morphological changes which occurred in the human lower jaw during the Pleistocene Period.

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## SECOND PAPER

## FIRST HALF

*Examiner—MR. T. C. RAYCHAUDHURI, M.A.*

*The questions are of equal value.*

*Answer only THREE questions.*

1. Give an account of the advent of round-headed men in Europe and their present dispersion in that Continent. Discuss the chances of their survival in the future.
2. Describe the various racial elements that have contributed, from the earliest times, to make up the present German people. Discuss the connection of the Germans with the other peoples of Europe.
3. Describe the physical characteristics of the *Hamites*, the *Half-Hamites*, and the *Bantus*, and give accounts of their dispersion over Africa.
4. Discuss the value of *stature* as a racial criterion.
5. Draw a map of Africa showing the position of the different racial types. Estimate the contribution of Africa to the peopling of the other continents.

## SECOND HALF

*Examiner—MR. H. C. CHAKRADAR, M.A.*

*The figures in the margin indicate full marks.*

*Answer Question 1 and ANY TWO of the other questions.*

1. Discuss the racial history of the Aryan-speaking peoples of India—their origin, their physical character, their present distribution, their affinity with other peoples of Eurasia, etc.

2. Give the racial history of the people of China from the earliest times to the present day, discussing their connection with their neighbours on all sides. 15.

3. Describe the origin and physical character of the Eskimo people, and their connection with the other aboriginal peoples of North America. Discuss their probable connection with the people represented by the Chancelade skull. 15.

4. Discuss the influence of climate upon the formation of the human nose, and the value of the *Nasal Index* as a criterion of racial classification. 15.

5. Describe the racial types in Melanesia, Australia, and Tasmania. 15.

### THIRD PAPER

Examiners—  $\left\{ \begin{array}{l} \text{PROF. P. MITRA, M.A., Ph.D.} \\ \text{MR. N. G. MAJUMBAR, M.A.} \end{array} \right.$

*The questions are of equal value.*

*Answer ANY FIVE of the following.*

1. Write a note on the antiquity of man in India.
2. Give an account of the palæolithic art of Europe.
3. How far is the recent viewpoint justified that the coup-de-poing culture is to be ascribed to a modern human type while the Mousterian culture was entirely different?
4. Describe the principal types of Indian Neoliths, and show their distribution.
5. Give an account of the Lake Dwellings of Europe, noting their cultural relations with the Danubian.
6. Briefly indicate\* the eastern elements in European civilization.
7. Write a note on the cattle of the Indus civilization and their relationship with the cattle of non-Indian zones.
8. Classify the prehistoric potteries of Sind, and indicate their sequence.
9. Write short notes on *any four* of the following:—

(a) Azilian, (b) Kitchen middens, (c) Chariot burial., (d) La Tène, (e) Vinça, (f) Still Bay culture.

## FOURTH PAPER

*Only THREE questions need be attempted in EACH half.*

## FIRST HALF

*Examiner—MR. T. C. DAS, M.A.*

*The figures in the margin indicate full marks.*

1. Write a short note on the caste system, indicating the horizontal vertical divisions. Discuss the recent views of origin of the caste system. 18
2. Sexual joking is permitted between certain relatives of opposite sexes in many countries. What significance would you attach to this custom? State reasons, and illustrate your views with Indian examples. 16
3. Define cross-cousin marriage, and give Indian examples. Discuss the theories of origin of this custom in its different varieties. 16
4. Discuss the relationship between the economic organization of a tribe and the rules of inheritance prevailing in it. Give examples. 16
5. Write short notes on the following: dual organization, asymmetrical descent, avunculate, sororate, gerontocracy. 16

## SECOND HALF

*Examiner—MR. K. P. CHATTOPADHYAY, M.A.*

*The questions are of equal value.*

1. Discuss the different methods of worship prevalent among the primitive tribes of India. Give illustrations.
2. What is magic? How far does it permeate the life and activities of primitive and civilized men in India?
3. Write an essay on the origin and distribution of totemism in India.
4. Analyze the marriage rites of a tribe or caste you know best, and show how far they are magical or religious.
5. Discuss the nature and character of primitive polity in India.

## (GROUP A)

## FIFTH PAPER

*Examiners—* { *MR. A. N. CHATTERJEE, M.B., B.S.*  
*SIR NILRATAN SIKKAR, Kt., M.A., M.D., Ph.D., LL.D.,*  
*D.C.L.*

*The questions are of equal value.*

*Answer ANY FIVE of the following questions.*

1. Write what you know about either 'Mutation' or 'Hereditary Transmission of Sex'.

2. Write a dissertation on any of the following topics:—

- (a) Effects of selection upon the composition of a people.
- (b) Effects of inbreeding.

3. State clearly what you understand by paravariation, mixovariation, and ideovariation. Illustrate your answer with examples.

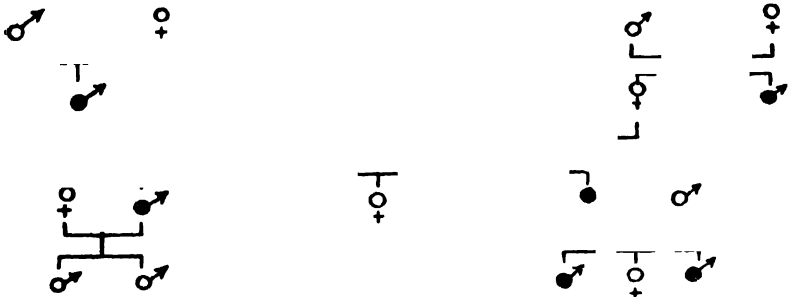
4. 'There can no longer be any doubt that the development of the shape of the skull is controlled by the Mendelian laws of inheritance.' Comment upon this statement.

5. In the study of human heredity state how it is possible to distinguish simple recessive characters from dimeric dominant characters.

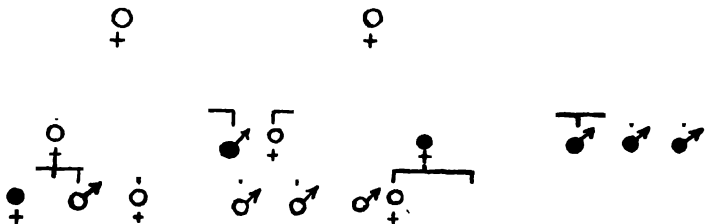
6. Describe the 'sib' method. Mention the sources of error which are likely to affect the data. How can you reduce the fallacy of small numbers?

7. What conclusions can you draw as regards the type of hereditary transmission from an analysis of the following tables?—

(a)



(b)





## SIXTH PAPER

MR. T. C. RAYCHAUDHURI, M.A.  
 „ P. C. MAHALANOBIS, B.Sc.(CANTAB).  
*Examiners--* SIR U. N. BRAHMACHARI, KT., M.A., PH.D., M.D.,  
 F.A.S.B., RAI BAHADUR.  
 MR. A. N. CHATTERJEE, M.B., B.S.

*The questions are of equal value.*

1. You are required to reconstruct a skull. What measurements and angles would you like to have, and why?

2. Explain in detail the purposes for which the following are used in Anthropometry:—

Platymeric index, Pilastric index, Sub-pubic angle, Sacral index, and Angle of torsion of the femur.

3. Write notes on *any four* of the following:—

Variation, Normal distribution, Probable error, Coefficient of correlation, Statistically significant, and Co-efficient of Racial Likeness.

4. The mean length of cubit in 1063 adult English males was recorded as 18·31 inches, and of their 1063 adult sons as 18·51 inches. The standard deviation was about 1 inch in both cases. Discuss whether the sons may be considered to be substantially differentiated from their fathers.

5. The following table gives the distribution of Head-Length of 200 Anglo-Indians of Calcutta. Find the mean value and the standard deviation together with their probable errors.

Range in mm.	Frequency	Range in m	Frequency
—160	1·5	184—187	30·0
160—163	3·5	187—190	21·0
163—166	3·5	190—193	19·5
166—169	1·5	193—196	5·0
169—172	14·0	196—199	4·5
172—175	15·0	199—202	2·0
175—178	13·0	202—205	2·0
178—181	30·0	205—	1·5
181—184	32·5		

(GROUP B)

FIFTH PAPER

*The questions are of equal value.*

FIRST HALF

*Examiner*—PROF. P. MITRA, M.A., PH.D.

*Answer ANY THREE questions.*

1. Describe the difference in the family-complex in patriarchal and matriarchal societies.
2. What is Dual Organization? What is its function in primitive society? Explain, if possible, with illustrations from Assam.
3. Compare the culture-strata theory with the ideas of the American historical geographical school.
4. What are the economic types of control in primitive society?
5. Discuss the part played by totemism in early social organization.
6. Write short notes on: avoidance, avunculate, Junogeniture, preferential mating.

SECOND HALF

*Examiner*—DR. G. S. GHURYE, PH.D.

*Answer ANY THREE questions.*

1. Describe the various forms of preferential mating, and trace their distribution.
2. Explain the nature of classificatory system, and discuss its implications regarding theories of social organization.
3. Write a critical note on the types of social organization common to India, Australia, and Melanesia.
4. Discuss the relation between slavery and social position of woman.
5. What is exogamy? Trace its distribution, and discuss its connection with totemism.

SIXTH PAPER

*The questions are of equal value.*

FIRST HALF

*Examiner*—MR. T. C. DAS, M.A.

*Answer ANY THREE of the following questions.*

1. Describe the Santal story of Genesis. What light does it throw on their racial affinity?
2. Trace the influence of totemism on Santal social and religious life.

## 'NATION' AND 'M. SC. EXAMINATIONS

Maternal polyandry is a recognised custom among the Santals. (O'Malley.) Discuss and give your own opinion.

Trace the influence of the people in Santal polity. How far has Santal polity developed beyond mere village organization?

5. Describe the position of women in Santal society.

### SECOND HALF

Examiner—RAI BAHADUR S. C. RAY, M.A.

*Answer ANY THREE questions only.*

1. Discuss the effects produced on the social system, religion, and customs, of the Santals, by their contact with Hindu castes on the one hand and their aboriginal neighbours on the other.

2. Give an account of the hunting-expeditions of the Santals—both *Pör-sendrā* and *Disöm sendrā*.

3. Describe such traces, if any, of the following customs as may have been observed or reported among the Santals: (1) *Couvāde*, (2) human sacrifice (*oṅgū* or *onḡgā*).

4. Compare the culture of the Santals with that of their neighbours—the Sauriā Pāhāriās and the Māl Pāhāriās, or the Mundas.

5. To what linguistic family, sub-family, and group does Santālī belong? What are the different branches and dialects of the particular group to which Santālī appertains? What are the distinguishing characteristics of the Santālī language?

### (GROUP C)

### FIFTH PAPER

*The figures in the margin indicate full marks.*

### FIRST HALF

Examiner—MR. H. C. CHAKLADAR, M.A.

*Answer only THREE questions.*

1. Describe the various systems of polyandry at present in vogue in India. Are there any evidences to show that it was prevalent in ancient India? 16

2. Describe the social organization of the Muhammadans of Bengal, and discuss how far their higher rate of increase as compared with the Hindus is due to it. 16

3. Trace some points of agreement in the marriage ritual of the Hindus with that of other branches of the Aryan-speaking peoples. 16

4. Explain the origin of the system of marriage—16  
(a) among the Nambudri Brahmins of the Malabar coast ;  
and (b) among Satavāhana rulers of India.

5. 'It is therefore argued that a post-Aryan development, but the essential growth of caste possible were of pre-A. development of caste would not and could not have been. Explain and discuss.'

tion,

SECOND HALF

Examiner—MR. K. P. CHATTOPADHYAY PRINCIPLES OF

Only THREE questions need be attempted.

1. What is Kulinism? Discuss its possible origin, noting the important variations of this custom among Brahmans and Kayasthas in Bengal. 18
2. Briefly describe the ceremony of disposal of the dead of a high caste Bengalee Hindu, indicating where it differs from that of (a) a caste below the rank of twice-born castes, (b) a primitive tribe of Chota Nagpur. Suggest possible reasons to explain the differences and similarities. 16
3. Describe and discuss the origin of— 16  
(a) the holi festival;  
or,  
(b) the Chadaḥ festival.
4. Describe the different modes of disposal of the dead prevalent in India, noting their distribution, and indicating the relationship between the various modes where such relationship exists. 16
5. Describe the rites performed at the birth of a Hindu male child, and point out the elements that appear to you to have been derived from the Vedic Aryans. 16

SIXTH PAPER

Only THREE questions are to be attempted from EACH half.

FIRST HALF

Examiner—DR. N. C. BANERJEE M.A., PH.D.

The questions are of equal value.

1. Discuss the principles underlying the conception of the Vedic gods and the mode of worship described in Vedic literature.
2. Give a picture of social and religious life as described in the Jātakas and the Buddhist canonical literature.
3. Trace the origin of Saivism from the earliest times to the present day, and estimate its influence upon Hindu social and religious life.

eternal polyandry is a re  
O'Malley.) Discuss and worship of any deity held in reverence  
legend and ceremonial connected with

Trace the influence of the  
and polity developed beyond r  
any three of the following:—

5. Describe the position

ism.

cult.

Krishna.

ghosts and evil spirits.

Examinee of the Karma theory upon the Hindu Mind.

## SECOND HALF

Examiner—RAO BAHADUR L. K. A. IYER, B.A., L.T.

*The figures in the margin indicate full marks.*

1. Estimate the influence of religion on caste and sub-caste formations, as also on food taboos. 16

2. What is the primary object of *Brāhma* or canonical marriage? How does this vary in other forms of marital relations? 16

3. What are the chief characteristics of the Hindu joint family? What are the modern tendencies for its disintegration? 16

4. State how far religion and mythology bear testimony to the social condition of the worshippers. 16

5. What is the cardinal doctrine of Jainism? Give an account of the tenets of the Jain sects. 16

6. Write an essay on *one* of the following:— 18

(1) Hindu-Moslem culture contact.

(2) Sufism.

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## M. L. Examination,

1935

### JURISPRUDENCE AND PRINCIPLES OF LEGISLATION.

*Examiner*—DR. BIJANKUMAR MUKHERJEE, M.A., D.L.

*Only FOUR questions are to be answered*

*The questions are of equal value.*

1. Explain or criticise the theory that the origin and growth of law—both the concept and the substance—has been to a great extent through usage and fiction.
2. "The social theory of law is not separable from the juristic" (Miraglia). Discuss.
3. Criticise the ethical conception of the *State* and point out the difficulties that may arise in practical administration of laws based on the Hegelian concept of Justice.
4. Write a short essay on  
(a) The End of Law  
*or,*  
(b) Socialistic principles in modern legislation.
5. "To conceive of law as the principle of co-existence and harmony of life is equivalent to regarding it as an organic principle." (Miraglia) Discuss.
6. "The law of bailment is the text of the theory of Possession." Explain.
7. Indicate precisely the contribution of adjective law in the development of the theory of *Consideration* in Contracts.
8. Discuss how far the personality in Corporations is real or fictitious?

### HINDU LAW

*Examiner*—THE HON'BLE MR. JUSTICE DWARKANATH MITTER, M.A., D.L.

*The figures in the margin indicate full marks.*

1. Give briefly the definitions of "Stridhan" according to the Sages as also according to the Commentators of the Bengal and Benares School. How far does inherited property rank as "Strindhan"?

Discuss this with reference to any leading case that you can think of.

2. "In England it is well settled that where a gift or bequest is made to a class of persons some of whom are incapable of taking the disposition fails as to all."—Mayne. Discuss how far this principle applies to bequests or gifts made by those governed by Hindu Law with special reference to leading cases. 20

3. In the recent case of Amarendra Man Singh Bhramarbar Rai vs Sanatan Singh, 57 C.L.J. 593 Their Lordships of the Judicial Committee of the Privy Council laid down the following proposition regarding the limits of the power of a Hindu widow to adopt to her husband:—"The vesting of property on the death of the last holder in some one other than the adopting widow, be it either another coparcener of the joint family, or an outsider claiming by reverter or by inheritance cannot by itself be test of the continuance or extinction of the power of adoption." Discuss the development of the law on this point with reference to the earlier decisions commencing from Bhoobanmoyee's case 1865 (10 Moore's Indian Appeals 279) and State accurately the line of reasoning on which the judgment of the Privy Council is based. 20

4. Write a short essay on the Testamentary power of Hindus

*Or,*

Discuss the law as to the liability of the son to pay the debts of the father under the Mitakshara School of Hindu Law and refer to leading cases on the subject. 20

5. State the grounds on which a person is disqualified from inheritance under the Hindu Law. Refer to the original texts.

*Or,*

Discuss with reference to decided cases the rule of devolution of impartible estates with special reference to Mitakshara Law. If the succession be governed by Dayabhaga Law state the modifications of the rule, if any. 20

## MUHAMMADAN LAW

*Examiner*—SIR SAHIB SUHRAWARDY, KT., M.A., B.L., BAR-AT-LAW.

*Five questions are to be attempted.*

*The questions are of equal value.*

1. Enumerate and discuss the sources of Muslim Law according to the Sunni Schools with special reference to the possibility or otherwise of its further development.

2. Write a discourse on the status of women in the Islamic law as compared with other systems of law you know of.

3. What is the difference in the fundamental principles on which the law of inheritance according to the Sunni and Shia schools is founded?

A Mahomedan dies leaving a son's son by a pre-deceased son and two son's sons by another pre-deceased son. How would you divide the inheritance according to the two schools?

4. State the law relating to the guardianship of the person and of the property of a minor. Is the mother entitled to deal with her children's property for their maintenance and education? Discuss the cases on the point.

How does guardianship in marriage differ from guardianship of person and property.

5. Give the principles and the true rule of *Musha* in strict accordance with the Muslim law. Examine the attempts made from time to time to mitigate the rigour of the rule noticing the relevant decisions.

6. State categorically the points of difference in the rules governing and qualifying disposition of property by gift and by wakf.

7. Give a summary of the law of pre-emption. Mention some ways of legally avoiding the enforcement of such right.

8. Write explanatory notes on the following terms:—

Ijtihad, izn, khula, mihr-i-misl, a'ul, khayar-i-bulugh, wali-i-jabir, movasabat.

## PRINCIPLES AND HISTORY OF ROMAN LAW

Examiner—DR. S. C. BAGCHI, B.A., LL.B., LL.D., BAR-AT-LAW.

N.B.—FOUR questions and no more need be attempted.

*The questions are of equal value.*

1. From what points of view is the same person called *libertus* and *libertinus*? To what dates and enactments must we refer the distinction of *libertini* into different classes?

How do you explain the partial survival of this distinction after the general grant of citizenship by Caracalla or Antoninus Pius?

2. Examine historically and critically the Roman concept of *Potestas*. Discuss in this connexion the importance of this concept in the development of the law of status in Rome.

3. "The will of Roman Law had for its primary purpose in historical times the appointment of a *heres* or *heredes*." Buckland.

Discuss this statement in connexion with acquisition *per universitatem*.

4. (a) *X* agrees with *Y* that he will buy a horse belonging to *Y* for a certain price if it wins a race for which it is entered. What will be the effect, in Roman Law, of *Y* (i) withdrawing the entry, (ii) giving instructions to the jockey not to win so that the horse is beaten.

(b) *A* buys a horse from *B*, subject to the agreement that if after being ridden and driven it does not give satisfaction *A* shall be free to return it within 10 days and cancel the sale. While being ridden by *C*, a friend of *A*, it stumbles and damages its knees, whereupon *A* returns it (within 10 days). *A* asks for a defensive formula. Draft it.

5. Gains says that in his time there was some doubt as to validity of acquisition of possession by agents. Discuss the matter. When was the doubt removed? Cite authorities in support of Gains' view.

6. Write an essay on Agency in Roman Law.



## PRIVATE INTERNATIONAL LAW

*Examiner*—THE HON'BLE MR. JUSTICE RUPENDRAKUMAR MITTER,  
M.Sc., M.L.

*FOUR questions only to be attempted.*

*The question are of equal value.*

1. Write a note on *Mobilia Sequuntur personam*, illustrating its application to the different topics dealt with in Private International Law.

2. Define precisely the operation of English bankruptcy proceedings over the debtor's properties at home and abroad, and the rights of the creditors, who have realised part of their claims from the foreign assets of the debtor, to receive dividends out of his assets in England.

3. Write a critical note on matrimonial domicile in relation to property rights.

4. "Another contention may be made, suggested or imitated from what takes place in contract, namely, that the defendant has voluntarily submitted himself to the law of the country in which he has acted or omitted to act, either by the very act or omission, or if he does not belong to that country, by having entered it."—Westlake—Chapter on Torts.—Comment.

5. "The interpretation of a contract and the effect, i.e., the rights and obligations under it of the parties thereto, are to be determined in accordance with the proper law of the contract."—Dicey. What are the rules generally adopted in determining "the proper law of the contract"? Illustrate your answer by examples.

6. Critically examine, and illustrate by examples, the principles on which Courts of England proceed on the question of measure of damages in cases of collision at sea of (a) two foreign ships, and (b) an English and a foreign ship.

## LAW RELATING TO THE TRANSFER OF IMMOVABLE PROPERTY AND THE LAW OF PRESCRIPTION

*Examiner*—SIR LALGOPAL MOOKERJEE, KT., B.A., LL.B.

*The figures in the margin indicate full marks.*

Only FOUR questions out of Group A and only TWO questions out of Group B need be attempted.

*Ten marks are reserved for neatness and style*

### GROUP A

1. Discuss briefly the law of transfers *pendente lite*, quoting leading cases on the subject. 15

2. A vendor and a vendee of land agree that if the vendee or his successor-in-title ever wanted to sell the land, he would give the vendor or his successor-in-title the first right to repurchase it at the price offered

by a third party. Twenty five years later, the vendee's son wants to sell the land to a third party. Can the vendor's son successfully enforce the contract? Give your reasons fully. 15

3. Discuss the doctrine of 'part performance'. How far was it applicable to India before the enactment of S.53A of the T.P. Act? Is the said section an improvement on the law as it previously existed? Give your reasons. 15

(b) A vendee gives an express warranty. The title proves the vendor, (a) expressly, (b) impliedly. 8

4. (b) A vendee gives an express warranty. The title proves defective. Will the fact, that the vendee made an independent inquiry as to the vendor's title before the purchase and was satisfied as to the title, be any defence to vendee's suit for breach of warranty? 7

5. A gift without specification of shares is made to A and B, by their father, who is governed by the Dayabhaga law. A dies and his wife and heir claims as against B a partition of a half share. Discuss the rights of the parties. 15

6. Is there any and what difference between the English and Indian law as to the effect of an agreement to sell immovable property, where the sale deed has not yet been executed. Discuss the reasons for the difference, if any. 15

#### GROUP B

7. What are 'natural rights'? Is there any and what difference between a 'natural right' and a right of easement? How are the two classes of rights acquired? 15

8. A landholder permits a man, who wants to settle in the former's village to earn there a living as an artizan, to put up a mud hut at a cost of Rs. 100 to live in it and to ply his trade in the village. Twenty five years later,, the landlord wants to resume the site of the hut. What are the respective rights of the two parties? Discuss the subject as fully as you may. 15

9. Discuss the right of an upper riparian owner to pollute the river water by erecting a jute mill on the bank of the river. 15

10. Can a dominant owner alter, and if he can, to what extent, his method of exercising the right of easement, acquired by him by prescription? Explain the law on the point. 15

## PRINCIPLES OF EQUITY

Examiner—MR. H. D. BOSE, BAR-AT-LAW.

N.B. (a) *Candidates are requested to give their answers in their own words as far as practicable.*

(b) *ONLY FOUR questions should be answered, of which questions 1 and 7 should be included.*

*The question are of equal value.*

(c) *In answering the questions, you are requested to refer to the leading English and Indian decisions.*

1. (a) Write a short summary of the origin of the Office of the Chancellor and the development of his Jurisdiction.

*Or,*

(b) The contribution made by Lord Eldon or by Sir George Jessel M.R. towards the development of Equity.

2. Write a short note on

(a) Assignment of a *chose in action*.

*Or,*

(b) Liability of a stranger to a Trust Estate as a *constructive trustee*.

3. Explain the doctrine of *consolidation of mortgages*.

*Or,*

Subrogation.

4. Discuss and illustrate the principles governing the granting of *Injunctions* in any two of the following matters:—

(a) for infringement of rights of support to buildings

(b) Breach of a covenant or agreement

(c) In respect of trade marks and trade names.

5. Describe the changes which have taken place in respect of the doctrine of Equitable Conversion of land into money since the decision in *Ackroyd Vs Smithson*. Have the acts of 1925 effected any changes?

6. "Once a mortgage, always mortgage and nothing but a mortgage." Explain and illustrate.

7. Summarise the main facts and discuss the principles in any *three* of the following cases:

(i) *Mackrath vs Symmone*.

(ii) *Savage vs Foster*.

(iii) *Dering vs Winchelsea* (Earl of).

(iv) *Elliot vs Marrison*.

(v) *Peachy vs Somerset* (Duke of).

(vi) *Chaucey's Case*.

(vii) *Sinclair vs Brougham*.

(viii) *Kreglinger vs New Patagonia Meat Co.*,

(ix) *Hooley vs Hatton*.

(x) *Dowse vs Gorton*.

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# Preliminary Examination in Law

## 1935 (a)

### FIRST PAPER

*The figures in the margin indicate full marks.*

FIVE questions only in each half to be attempted.

#### FIRST HALF

Examiners— { MR. BIRESWAR BAGCHI, M.A., B.L., BAR-AT-LAW.  
 „ S. N. BHATTACHARJYIA, B.A., BAR-AT-LAW  
 „ SATYENDRAKISORE GHOSH M.A., B.L.

1. 'Law is a creation of Sovereign Authority.' Explain and discuss. 10
2. Explain what is meant by formal and material sources of law. Write a short note on custom as a source of law. 10
3. Define your conception of right. How are rights created and extinguished? 10
4. Define and illustrate *Jura in Re Aliena*. 10
5. What is legal sovereignty? What is generally the nature of sovereignty in the 'Native States of India'? 10
6. Write a short note on juristic persons. Is a Hindu deity a juristic person? 10
7. Would International Law fall within Austin's conception of law? Discuss. 10

#### SECOND HALF

Examiners— { DR. S. K. GUPTA, M.A., B.L., B.LITT., PH.D.,  
 MR. RAMESHCHANDRA PAL, M.A., B.L. BAR-AT-LAW.  
 „ ABUL QUASEM, B.L.

1. What is a contract? How are contracts terminated? Illustrate your answer. 10
2. Distinguish crimes from torts. 10
3. Define and illustrate the following:— 10
  - (a) Hypothec.
  - (b) Pledge.
  - (c) Easement.
4. Discuss Maine's conception of the origin of property. 10
5. Write an essay on the Law of Nature. 10
6. What do you understand by the expression 'legal fictions'? Indicate its use. 10
7. Write a short note on the origin and development of the conception of wills. 10

## SECOND PAPER

*The figures in the margin indicate full marks.*

*Candidates shall give their answers in their own words as far as practicable.*

## FIRST HALF

Examiners— { DR. A. CHAUDHURI, B.A., LL.B., LL.D., BAR-AT-LAW.  
MR. JAJNESWAR MAJUMDAR, M.A., M.L.  
,, SADHANCHANDRA RAICHAUDHURI, M.A., B.L.

*Five questions are to be answered.*

1. Trace the development of the law of prescription from the XII Tables to the reign of Justinian. 10

*Or,*

Give an account of the Roman form of guardianship known as *Cura*. 10

2. Discuss the part played by the praetor in the development of Roman Law. What is its analogue in English Law? 10

3. (a) Criticize Justinian's definition of slavery as 'the condition of being under somebody's complete power'. 10

(b) Enumerate the various ways in which a slave could get his freedom.

4. Write short notes on *any two* of the following:— 10

(a) Emphyteusis.

(b) Quasi-agency in Roman Law.

(c) Equitable defence in Roman Law.

(d) Noxal liability.

5. State the praetorian rules regarding bonorum possessio. What reforms were effected by Justinian? 10

*Or,*

What were the nature and object of fideicommissum? Show how the law of wills was affected by fideicommissum. 10

## SECOND HALF

Examiners— { MR. PANCHANAN GHOSH, M.A., B.L.  
,, GOPENDRANATH DAS, M.A., B.L.  
,, P. K. CHAKRABARTI M.A., B.L.

*FIVE questions are to be answered, THREE being from Group A and TWO from Group B.*

## GROUP A

1. What were the requirements of a culpa under the Aquilian Law? Did the Aquilian Law recognize any exceptions to the general rule? 10

2. (a) State the limits of the law of self-defence under the Aquilian Law. 10

(b) A sees a thief taking away his goods and, with a view to recover the goods, wound the thief. Is A liable?

Or,

Who is entitled to an Aquilian action? Does it end with the death of the plaintiff? 10

3. What are the fundamental provisions of Lex Aquilia? How were the rules extended by actiones utiles and in factum? 10

Or,

Discuss the liability of A under the Aquilian Law in the following cases:— 10

(a) A pushes a slave from a bridge. The slave is drowned and killed.

(b) A, a physician, prescribes a wrong medicine. The patient dies.

(c) A irritates a horse on which a slave is riding. The slave is thrown off and is killed.

#### GROUP B.

1. Justify or criticize Maine's dictum that the movement of progressive societies has been from status to contract. 10

2. 'The root of the pedigree of wills is the old testament with the copper and the scales founded on Mancipation or Conveyance.' Discuss. 10

Or,

'The primitive history of criminal law divides itself into four stages.' Discuss. 10

### THIRD PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

Examiners— { MR. DEBABRATA MUKHERJEE, M.A., B.L.  
,, DHIRENDRAKRISHNA RAY, B.L.  
,, MAHIMAMUKUL HAJRA, B.L.

1. Mention some important (a) *Dharmasutras*, (b) metrical *Smritis*, and (c) commentaries and digests. Of these, which are most important as a source of Hindu Law in modern times? Mention the new sources of Hindu Law that have come into existence during the British period. 10

Or,

What is the chief distinction between approved and disapproved forms of marriage? Has this any practical importance in modern times? According to what law is succession to the property of parties married under Act XXX of 1923 (the Special Marriage Amendment Act) to be governed?

2. Give the main arguments by which Vijnaneswar (Mitakshara) establishes and Jimutabahana (Dayabhaga) refutes the doctrine of Right by birth (of the son) in ancestral property. 10

Or,

Mention some of the incidents of the Mitakshara coparcenary property, and point out wherein it differs from the Dayabhaga coparcenary property.

3. State, on reference to leading cases, the limit within which a widow can validly exercise the authority to adopt, and the circumstances under which such authority is extinguished. 10

Or,

Explain what is meant by Sutherland's marriage rule in regard to adoption, and state how far the rule is actually followed in practice. Is adoption of the brother valid under Hindu Law?

4. A Hindu dies leaving ancestral property, Rs. 10,000, and self-acquired property, Rs. 2,000, and debts for wine to a wine merchant amounting to Rs. 4,000. How far is his son in the two schools legally bound to pay the debt? Give reasons for your answer.

5. (a) A man dies leaving two widows A and B, and two sons by A, and no son by B. On a partition what would be the shares of the parties in the Mitakshara and in the Dayabhaga schools? 10

(b) A man dies leaving a widow, two grandsons by a predeceased son, and three grandsons by another predeceased son, and the two widows of the predeceased sons. On a partition what would be the shares of the parties entitled to shares?

#### SECOND HALF

Examiners— { MR. N. NANDI, BAR-AT-LAW.  
 „ GOPALCHANDRA MUKHERJEE, B.L.  
 SAILENDRAPRASAD GHOSH, B.L.

1. Discuss, on reference to texts and decided cases, the rights of an illegitimate son (Dasiputra) under Hindu Law. A Sudra dies leaving a widow and an illegitimate son by a permanent concubine. What are the rights of the parties to the estate of the deceased? 10

Or,

Give the main incidents of an impartible estate. How is the heir to the last holder to be determined, according to the two schools, where the estate is ancestral and the family joint?

2. How are persons entitled to maintenance usually classified under Hindu Law? Can a widowed daughter-in-law legally claim maintenance (a) from her father-in-law, and (b) from those who inherit the father-in-law's property? Give reasons. 10

Or,

Point out the differences as to what constitutes partition according to the two schools. What is the presumption as to the states of the remaining members of a Mitakshara joint family when one of the coparceners separates, and goes away with his share?

3. What is *re-union* and with whom is *re-union* valid according to the Mitakshara and the Dayabhaga? A man dies leaving a reunited and a separated son. Who would inherit his property according to the Mitakshara and the Dayabhaga schools? Give reasons. 10

Or,

Explain what is meant by the general rule of exclusion of women from inheritance to males under Hindu Law. On what is the rule based? State how far this rule is actually followed in the different schools.

4. Discuss on what grounds sister is recognized as heir in some schools and rejected in others. What change has now been made in the status and position of the sister as an heir under Hindu Law? 10

Or,

How is *Stridhan* defined according to the Mitakshara and the Dayabhaga schools? State how far the definitions are accepted by Courts. What is the nature of the property inherited by a woman from a male according to the different schools, and who would inherit it after her death?

5. State briefly the decision and the principles laid down in *Ram-chandra v. Vinayah* (41 I.A. 290: 42 Cal. 384). 10

#### FOURTH PAPER

*The questions are of equal value.*

N.B.—Candidates will answer TEN questions in all, FIVE from each half. Credit will be given for reference to decided cases.

##### FIRST HALF

Examiners— { Mr. P. MITTER, BAR-AT-LAW.  
                          ,, H. BANERJEE, B.L., BAR-AT-LAW.  
                          BORENDRANATH BASU, BAR-AT-LAW.

1. 'In England there is a real dualism between the Crown in Parliament and the Crown in Council.' Explain.

2. How far is it true to say that the judiciary in England is under the direct control of the legislature?

3. Distinguish between *any two* of the following:—

(a) Federation and confederation.

(b) Allegiance and domicile.

(c) A crown colony and a protectorate.

4. What do you mean by *Droit administratif*? Do you advocate Administrative Courts for India?

5. 'The English Constitution must be found in statutes, in judicial decisions, in customs, in convention.' Explain and illustrate.

6. Discuss the principles of law laid down in—

*either,*

*Feather v. Queen*, 6 B & S 257 ;

*Or,*

*Entick v. Carrington*, 19 St. tr. 1030.

7. Answer *any two* of the following:—

(a) Can the Crown in England enter into a treaty with a foreign country, say, Soviet Russia, without the knowledge and consent of the Parliament at Westminster?

(b) Can the House of Commons in England confer Dominion Status on India (i) without the concurrence of the House of Lords, (ii) in opposition to its wishes?

(c) A British Indian subject in Calcutta is arrested and detained without trial in the territory of a Native Prince. Has he any remedies? Advise him.

(d) What is the effect of a vote of censure on the ministry in (i) England, (ii) India?



## SECOND HALF

Examiners— { Mr. S. C. CHAUDHURY, M.A., LL.B., BAR-AT-LAW.  
 „ N. GOSWAMI, BAR-AT-LAW.  
 „ SUDHINDRAKRISHNA DUTTA, M.A., BAR-AT-LAW.

8. 'The essence of the English System is in the equilibrium, the delicate equipoise between the powers of the ministry, the House of Commons, and the people.' Discuss.

9. How can an alien become naturalised under the British Nationality and Status of Oiliens Act, 1914-1922?

10. What do you mean by 'Parliamentary Privileges'? Can the Courts in England control their exercise? If so, to what extent?

11. Comment on *any two* of the following:—

(a) 'The pretended power of dispensing with laws or the creation of laws, as it hath been assumed and exercised of late, is illegal.'

(b) 'The raising of or keeping of a standing army within the kingdom in time of peace, unless it be with the consent of Parliament, is against law.'

(c) 'No scutage or aid will be levied without the consent of the *Commune Conatium* except the three customary aids.'

12. Discuss the constitutional significance of—

*either,*  
*Musgrove v. Puledo* (1875 A.C. 102);

*Or,*

*Secretary of State v. Moment* (40 I.A. 48).

13. Write notes on *any two* of the following:—

(a) The Committee of Ways and Means, (b) the Attorney General, (c) the Board of Trade, (d) the Emergency Powers Act, 1920.

14. Discuss *any two* of the following:—

(a) A Judge (i) *calls* a witness before him in Court 'a rogue, a scoundrel, and a rascal', (ii) describes him in the same language in his *judgment*. Has he any remedies against the Judge under (1) the laws of India, (2) the laws of England?

(b) A (i) Frenchman, (ii) British Indian subject, is **detained** in (1) England, (2) India, under the orders of the Executive. Can the Executive justify their conduct on the ground of 'Act of State'?

(c) A Judge in (i) England, (ii) India, *unreasonably* refuses to issue a writ of Habeas Corpus in favour of a prisoner. Is the Judge liable (1) civilly, (2) criminally?

(d) Can the Crown proclaim martial law *in time of peace* in (i) England, (ii) India?

## 1935(b)

## FIRST PAPER

## Jurisprudence

*The figures in the margin indicate full marks.*

*Answer ANY FIVE questions from EACH half.*

## FIRST HALF

Examiners— { Mr. SITARAM BANERJEE, M.A., B.L.  
 „ SATYENDRA K. GHOSH, M.A., B.L.  
 „ B. S. DUTT, BAR-AT-LAW.

1. 'Jurisprudence is the formal science of positive law.' Discuss. 10
2. Classify *rights in rem*. Why are they so called? 10
3. Distinguish a tort from a crime. What are *jura in re aliena*? 10
4. Why does Holland describe International Law as 'private law writ large'? 10
5. What are the characteristics of artificial persons? How do they differ from natural persons? 10
6. Give an idea of Austin's conception of sovereignty. Is sovereignty divisible? 10
7. Write notes on *any three* of the following: (a) status, (b) administrative law, (c) juristic act, (d) corporation sole, (e) accessory contracts, (f) dynamic rights. 10

## SECOND HALF

Examiners— { Mr. SURESHCHANDRA CHAKRABARTI, M.A., B.L.  
 „ B. C. DUTT, M.A., BAR-AT-LAW.  
 „ SRIDHAR CHATTEJEE, BAR-AT-LAW.

1. Illustrate how legal fiction has enabled law to keep pace with the needs of advancing society. 10
2. Discuss Maine's patriarchal theory about the origin of the State. 10
3. Assess the contributions made by the doctrine of the Law of Nature to Modern International Law. 10
4. 'The progress of civilized societies has been from status to contract.' Discuss. 10
5. What benefits did Feudalism confer upon Europe? 10
6. What are the conceptions underlying modern testamentary dispositions? How do they differ from ancient conceptions? 10
7. Compare and contrast the Lord Chancellor of England with the Prætor of Rome as equity judges. 10

## SECOND PAPER

## Roman Law

*The questions are of equal value.*

*FIVE questions only are to be answered from EACH half.*

## FIRST HALF

Examiners— { Mr. ROMESCHANDRA PAL, M.A., M.L.  
 „ ABUL HUSSAIN, M.A., M.L.  
 „ JAJNESWAR MAJUMDAR, M.A., M.L.

1. 'The history of Roman Law is the gradual supersession of *jus civile* by *jus gentium*.' Explain.
2. Gaius says 'There are almost no other men who have so much power over their sons as we have.' Describe briefly the nature and extent of this power, and how it was modified by subsequent legislation.
3. Discuss 'accessio' and 'specificatio' as methods of acquiring property. How would you adjust the rights of the parties, when a man

builds a house with his own labour and materials upon the land of another?

4. How would you distinguish '*Mutum*' from '*Commodatum*'? Describe what is meant by '*Emphyteusis*', and state whether it has any analogy to the modern contract of bailment.

5. Write a short note on the Roman Law of Mortgage, explaining fully the conceptions of '*Pignus*' and '*Hypothec*'.

6. Discuss briefly the various restrictions upon the free testamentary capacity of a Roman Citizen. What do you mean by '*Falcidian Fourth*'?

7. Describe briefly the characteristics of the three systems of *procedue* known to the Romans.

## SECOND HALF

Examiners— { Mr. P. K. CHAKRABARTI, M.A., B.L., BAR-AT-LAW.  
 „ D. R. DAS, BAR-AT-LAW.  
 Dr. A. CHAUDHURI, B.A., LL.B., LL.D., BAR-AT-LAW.

1. What is *Lex Aquilia*? State briefly how its original scope was subsequently extended?

2. Discuss briefly how damages were assessed when a slave was wrongfully killed.

3. A pruner throws down a branch of a tree on a place open to the public. He does not call out before letting the branch drop. It falls on a man who is killed. Is the pruner liable?

4. Discuss briefly the rules for determining liability when one ship collided with another.

5. 'In the infancy of jurisprudence the citizens had to depend for protection against violence or fraud not on the law of Crimes but on the law of Torts.' Explain.

6. Trace briefly the development of the idea of 'territorial sovereignty'.

7. 'The prolongation of a man's legal existence in his heir is neither more nor less than a characteristic of the family transferred by a fiction to the individual.' Explain.

## THIRD PAPER

### Hindu Law

*The questions are of equal value.*

## FIRST HALF

Examiners— { Mr. ANNADA CHARAN KARKUN, M.A., B.L.  
 „ MAHIMAMUKUL HAJRA, B.L.  
 „ HARIDEB CHATTERJEE, M.A., B.L.

*Answer ANY FOUR questions.*

1. Write a short note on 'Custom' as a source of Hindu Law, and give the essentials of a valid custom.

2. Vasistha says : "न स्त्री दद्यात् प्रतिगृहीयादप्यवानुज्ञानाङ्गत्वात्" (Nor let a woman give or accept a son unless with the assent of her Lord.)

State the law regarding widow's capacity to adopt in different schools of Hindu Law.

3. 'The liability of one person to pay debts contracted by another arises from three completely different sources.'

(*Mayne on Hindu Law and Usage.*)

Write a short note on a Hindu son's liability to pay his father's debts with reference to these three different sources.

4. Examine whether the right of maintenance in Hindu Law is an absolute obligation which attaches itself upon certain persons by virtue of their relationship to the destitute individual, or whether it is merely a claim upon the property of those who hold it by virtue of their possession of the property.

5. Explain what is 'Hindu coparcenary', and point out the difference, if any, between a 'Hindu joint family' and a 'Hindu coparcenary'.

6. Discuss the principles laid down in:—

(a) *Buddha Singh v. Lattu Sing*, 42 I.A. 208.

Or,

(b) *Harikishen v. Kashi Pershad*, 42 I.A. 64.

Or,

(c) *Brijnarain v. Mangal Prosad*, 51 I.A. 129.

#### SECOND HALF

Examiners— { MR. KHETRAMOHAN GHOSE, B.L.  
 „ HARIPRASANNA MUKHERJEE, M.A., B.L.  
 „ BHUPAL CHANDRA RAI CHAUDHURI, M.A., B.L.

Answer ANY FOUR questions.

1. Write a short note on the principle of 'religious efficacy' as a principle of succession in Hindu Law.

2. A Hindu widow transfers a portion of her husband's estate to a stranger for valueable consideration, but without legal necessity, and thereafter surrenders the whole estate in favour of the next reversioner. The next reversioner then seeks to recover the property transferred to the stranger. Discuss how far he is entitled to do that.

3. A Hindu governed by the Dayabhaga law dies leaving three sons, of whom one became blind, another became mad, and the third became a convert to Mahomedanism before their father's death. All these three sons claim the inheritance. Discuss their respective claims.

4. Write a short note on Hindu Law regarding 'gains of learning'.

5. Explain the rules for determining priority amongst the heirs falling within the class of Bandhus according to the Mitakshara school of law.

6. State the principles laid down in:—

(a) *Chotay Lal v. Chunna Lal*, 6 I.A. 15.

Or,

(b) *Monohar Mukherjee v. Bhupendranath Mukherjee and others*, 56 C.L.J. 468 (F. B.).

#### FOURTH PAPER

#### Constitutional Law

The questions are of equal value.

#### FIRST HALF

Examiners— { MR. P. N. BANERJEE, M.A., B.L., BAR-AT-LAW.  
 „ N. GOSWAMI, BAR-AT-LAW.  
 „ ANWARUL AZIM, B.A., LL.B., BAR-AT-LAW.

1. What, according to Dicey, are the leading characteristics of federal constitutions?

Would you describe the constitutions of (i) Canada, (ii) Australia, (iii) India as proposed in the Government of India Bill, as federal? Give reasons for your answer.

2. The French Government desire to obtain the extradition of X, a British subject at present in Calcutta, on a charge of theft committed in Paris. As to what facts has a Magistrate in Calcutta to be satisfied before he can commit X to await surrender?

3. What determines the nationality of a married woman under English common law? To what extent has the common law been modified by Statute?

Or,

In what circumstances in British India has the subject the right to institute legal proceedings against the Crown? Who is the proper defendant in such proceedings?

4. Give the main provisions of the following Statutes:—

(1) The Parliament Act, 1911.

(2) The Bill of Rights, 1688.

(3) The Government of India Act, 1858.

Or,

Explain and discuss the following legal maxims:—

(1) The King can do no wrong.

(2) The King never dies.

5. Give the facts, the legal principles involved, and the points decided in *one* of the following:—

*Ex parte D. F. Marais*, 1902 A.C. 109.

*Stockdale vs. Hansard*, 9 A. & E. 1.

## SECOND HALF

Examiners— { Mr. S. C. CHAUDHURI, M.A., LL.B., BAR-AT-LAW.  
 „ KALYANKUMAR BOSE, M.A., BAR-AT-LAW.  
 „ SANATKUMAR CHATTERJEE, M.Sc., B.L.

1. Write notes on *any two* of the following:—

(a) The Lord Chancellor.

(b) The Court of Criminal Appeal in England.

(c) The Church of England Assembly Powers Act, 1919.

(d) The Emergency Powers Act, 1920.

2. What is meant by 'ministerial responsibility'? To what extent does it exist in India at the present day?

3. Can the courts in (i) England, (ii) India, (iii) Canada pronounce upon the validity or the constitutionality of laws passed by the Legislature? If so, to what extent?

4. Comment on and explain *one* of the following passages:—

'The Charter of Colonial legislative independence is the Colonial Laws Validity Act of 1865.' (*Dicey*.)

Or,

'Appropriation is the keynote of Parliament's control over the purse.' (*Sarvadhicari*.)

5. What functions are discharged under the British Constitution by (a) the Cabinet, and (b) the Privy Council? Outline the development of these bodies since the beginning of the seventeenth century.

Or,

In what manner does the writ of Habeas Corpus secure individual liberty in (a) England, (b) British India?

## Intermediate Examination in Law

**1935(a)**

## FIRST PAPER

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

## FIRST HALF

*Examiners—* { MR. ABUL QUASEM, B.A., LL.B., BAR-AT-LAW.  
,, ABDUL ALI BISWAS, M.A., B.L.

1. *Either,*  
Describe generally, without going into details, the different classes of heirs under Muslim Law. 7

*Or,*

State the general rule of interpretation of the Hanafi school of Muslim Law.

2. *Either,*  
Discuss briefly the principles of disposing of property by means of Will under Muslim Law. 15

Or,  
State briefly the principles of marriage and 'Mahr' or dower. 15

3. *Either,*  
When does the right of pre-emption arise, and how long should it continue for enforcing the right under the Muslim Law? 10

*Or,*

When can a gift be revoked under the Muslim Law? 10

4. State the law relating to grant of leases by Mutwallis. 5

5. Discuss the case of *Imambandi v. Haji Mutsaddi*, L.R. 45 I.A. 73.

## SECOND HALF

*Examiners—* { MR. WAHED HUSSAIN, B.L.  
                          ,, BASANTAKUMAR MUKHERJEE, B.L.

1. *Either,*  
What is the local extent of the Indian Majority Act (Act IX of 1875)?

Or,  
What rights of persons are excluded from the operation of this Act?

2. What is the age of majority under the Indian Majority Act, and how is it computed? 8

3. Discuss the case of: *Basanta v. Narayaniah*, L.R. 41 I.A. 314. 15

4. *Either,*  
State the rules of succession to the English Crown. 10

*Or,*

What powers and duties have parents over their (a) legitimate, and  
(b) illegitimate children? 10

5. Describe the effects of a divorce on the rights of the husband and the wife under the English Law and the Muslim Law. 10

## SECOND PAPER

*The questions are of equal value.*

*Answer ANY FIVE questions from EACH half.*

## FIRST HALF

Examiners— { MR. SANATKUMAR CHATTERJEE, M.Sc., B.L.  
 „ ABINASHCHANDRA GHOSH, M.A., B.L.

1. State the definition of 'Notice' in the Transfer of Property Act, along with the explanations relating to the cases of (i) notice through registered instrument, (ii) notice through possession, and (iii) notice through agent.

2. *A*, a Hindu owning separate property, dies leaving a widow *B* and a brother *C*. During his lifetime, *A* made a settlement of his separate property to his wife for her life, and then to his son if he should have one, and in default of a son to *C*. Discuss, by reference to a leading case, whether the interest of *C* is transferable during the lifetime of *B*.

3. 'A condition repugnant to the interest created is void.' Discuss by reference to the provisions of the Transfer of Property Act.

4. 'One cannot take under, and against the same instrument.' Discuss, and point out the exceptions to this rule.

5. Discuss, giving illustrations, when a third party may enforce rights and obligations in respect of immoveable property against a transferee thereof.

6. Discuss the rule of equitable estoppel in the light of the case of *Benram v. Kundanlal*, L.R. 26 I.A. 58.

7. *A* makes a gift of land to *B*. *C* sues *A* for possession of the land. While this suit is pending *B* transfers the land to *D*. *A* dies and *C* obtains a decree for possession against *B* as legal representative of *A*. Is *D*'s title affected by the rule of *lis pendens* so as to be subject to *C*'s decree?

What is the period during which a suit or proceeding may be said to be pending for the purpose of the rule of *lis pendens*?

## SECOND HALF

Examiners— { MR. J. W. CHIPPENDALE, M.A., B.L.  
 PRAMATHANATH MITTER, B.L.

1. State the liabilities of the seller and the buyer in a sale of immoveable property.

2. Define (i) a mortgage by deposit of title-deeds, and (ii) an anomalous mortgage. Give an instance of an anomalous mortgage. Does a mortgage by deposit of titledeeds require a registered instrument?

3. Who are the persons entitled to sue for redemption of the mortgaged property? Can a reversioner institute a suit during the lifetime of a limited owner to redeem a mortgage by such limited owner?

4. In what cases has the mortgagee a right to sue for the mortgage-money?

*A* mortgaged a property to *B* and then to *C*. *A* failed to pay off the encumbrance in favour of *B* when it became due, and *B* brought the property to sale. Is *C* entitled to sue at once for his mortgage-money? Give reasons for your answer.

5. Discuss the question of partial subrogation in the light of the decision in the case of *Gurdeo Singh v. Chandrika*, I.L.R. 36 Cal. 193. Examine how far the decision is in accord with the provisions of the Transfer of Property Act after its amendment in 1929.

6. A plot of land is sold for fifty rupees by an unregistered deed. The purchaser had already been in possession of the land as a lessee. Discuss, giving reasons, whether the transaction is valid. What is the effect of nonregistration of documents required to be registered under Section 17 of the Indian Registration Act?

7. State, giving reasons, whether the following documents require registration: (i) a will whereby immoveable property of the value of more than one hundred rupees is bequeathed, (ii) leases of immoveable property. Discuss, giving reasons, whether a registered bond relating to moveable property has priority over a prior unregistered bond relating to the same property.

### THIRD PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF.

Examiners— { MR. RAMENDRAMOHAN MAJUMDAR, M.Sc., B.L.  
 „ SUSIL K. RAI CHAUDHURI, M.A., B.L.,  
 BAR-AT-LAW.

*Answer Questions 3 and 6 and ANY TWO of the rest.*

1. Write a short note on Shelly's case. 10
  2. State clearly the rule against perpetuities. Give the exceptions to the rule. 10
  3. Explain the principles laid down in— 15  
*Morley v. Bird*, 3 ves 629 ;  
 Or,  
*London S. W. Ry. Co. v. Gomm*, I.L.R. 20 Ch. D. 562.
  4. Explain any three of the following:— 10  
 (a) Estate tail, (b) Estate pur autre vie, (c) base fee, (d) equitable mortgage, (e) tacking.
  5. 'A contingent remainder must vest during the particular estate or eo instanti that it determines.' Explain. 10
  6. 'An estate in fee simple possesses all the incidents of absolute ownership except the form.' Comment. 15
- Give a short account of the progress of a fee simple tenant's right of alienation as against his heirs.

#### SECOND HALF

Examiners— { MR. RAMAPRASAD MOOKERJI, M.A., B.L.  
 „ MAHENDRANATH BAGCHI, B.L.

*Answer Question 6 and ANY THREE of the rest.*

1. What is 'domicil of origin'? How can a new domicil be acquired and lost?  
 Explain the importance of the question of domicil in the law of succession in British India. 10
2. A fund is bequeathed to A for life, and after his death to all his children who shall attain the age of 25. The will was executed in 1915. The testator died in 1931 leaving A. At the death of the testator





SECOND HALF

Examiners— { Mr. S. P. MOOKERJI, M.A., B.L., BAR-AT-LAW.  
MANMATHANATH RAY, M.A., B.L.

8. How far are (i) infants, (ii) corporations, liable for tort?
9. What do you understand by *damnum* and *injuria*? Give instances of *damnum sine injuria* and *injuria sine damno*.
10. (a) *A* sues *B* for defamation and obtains damages. *B* appeals and dies when the appeal is pending. Can *B*'s son continue the appeal?
- (b) In an action for libel, are the following good defences? If so, under what circumstances?—
  - (i) The truth of the libel.
  - (ii) The bona fides of the author of the libel.
11. When is a master liable for the torts of his servant?
12. Explain clearly '*volunt non fit injuria*'.
13. Can one wrong-doer claim contribution from another wrong-doer? If so, under what circumstances?
14. State clearly the facts of, and discuss the principles of, law involved in—

*Jefferson v. Derbyshire Farmers, Ltd.* (1921), 2 K.B. 281.

Or,

*Quinn v. Leathem* (1901), A.C. 495.

1935(b)

FIRST PAPER

**Mahomedan Law and Law of Persons**

*The questions are of equal value.*

Answer FIVE questions in EACH half, of which Question 8 marked with asterisk, in each half, is COMPULSORY and must be answered.

FIRST HALF

Examiners— { Mr. AMIN AHMED, M.A.(CAL.), LL.B.(CANTAB)  
„ WAHED HOSSAIN, B.L.

1. Enumerate the different classes of heirs under the Hanafi School of Mahomedan Law, and explain their respective rights to inheritance. Explain the distinction between the Shiah and Sunni Law of inheritance.
  2. State and discuss the causes of exclusion from inheritance under the Mahomedan Law.
  3. What are the conditions necessary for a valid marriage under the Mahomedan Law?
  - Distinguish between void and invalid marriages. Explain the option of puberty.
  4. Discuss the rules of legitimacy under the Mahomedan Law, and refer to any leading case on the subject.
  5. Define *Hiba-bil-ewaz*, *marz-ul-mout*, and *mushaa*. What are the essentials of a gift under the Mahomedan Law?
  6. What are the different kinds of *Wakf* under the Mahomedan Law?
- Enumerate the duties of the *Mutwalli* of a *Wakf*.

7. Explain the objects in whose favour a will may be made under the Mahomedan Law. How may a will be revoked?

\*8. Discuss the leading case of *Enatullah v. Kowsher Ali* (I.L.R. 54 Cal. 266 S.B.).

## SECOND HALF

Examiners— { Mr. MANMATHANATH RAY, M.A., B.L.  
                  { „ M. ISPAHANI, M.A., BAR-AT-LAW.

1. Explain the maxim 'The king can do no wrong', and point out its practical consequences.

2. Who are natural-born British subjects? Does the English Law provide any means whereby a person may divest himself of, or acquire, the status of a British subject?

3. Discuss the legal capacity of contracting a valid marriage under the English Law.

4. Discuss the effects of marriage in regard to property under the English Law, pointing out the common law on the subject, and the subsequent modifications.

5. State the duties of parents towards their (i) legitimate children, (ii) illegitimate children.

6. What are the powers of the Court in appointing or removing a guardian? What is the paramount consideration for the Court?

7. 'The progress of human institution is from *status* to *contract*.' Discuss if this applies to the condition of service in England. Refer to a well-known case on the subject.

\*8. Discuss the leading case of *Abraham v. Abraham* (9 M.I.A. 195.)

## SECOND PAPER

### Law of Transfer

*The questions are of equal value.*

*Candidates are required to answer ANY FIVE questions in EACH half.*

## FIRST HALF

Examiners— { Mr. RAMAPRASAD MOOKERJI, M.A., B.L.  
                  { „ GOPALCHANDRA MOOKERJI, M.A., B.L.

1. What is the nature and character of the property dealt with in the Transfer of Property Act?

Would the following properties come within the scope and purview of the Act?—

(a) a turn of worship, (b) a mortgage debt, (c) standing timber, (d) an electric ceiling fan in a house, (e) equity of redemption.

2. What is an actionable claim? Is right to sue for damages for breach of a contract an actionable claim? Show how an actionable claim can be transferred, stating the rights and liabilities of the transferee.

3. A sells a plot of land to B. There is a covenant in the conveyance that B and his assigns will never erect a godown for storing hides on the land. Are B and his assigns bound by the covenant?

4. 'It is scarcely correct to speak of *lis pendens* as affecting a purchaser through the doctrine of notice.' Explain this with special reference to the leading case of *Bellamy v. Sabine* (1 De G. & J. 566).

5. Explain, with illustrations, the difference between a vested and a contingent interest and between conditions precedent and subsequent.

*A* makes a gift to *B* for life and then to *C*. *C* dies during the life-time of *B*. What becomes of the gift to *C*?

6. How is a lease determined (a) by surrender, and (b) by forfeiture? Explain the difference in their effect on underleases, stating reasons.

7. Can there be redemption of a portion of mortgaged property? If so, under what circumstances?

**A mortgaged two houses to B for Rs. 1,000. C purchased at Court sale A's interest in one of the houses and sold it to P. P sued to redeem the house and prayed that the mortgagee be ordered to convey it to him on payment of Rs. 500. Can P. succeed? Discuss.**

## SECOND HALF.

*Examiners—* { MR. MAHENDRANATH BAGCHI, M.A., B.L.  
.. NARAYANCHANDRA KAR, B.L.

8. Explain clearly the characteristics of an English mortgage, and distinguish it from a mortgage by conditional sale.

9. Under what circumstances is a prior mortgagee postponed to a subsequent mortgagee? Give examples.

10. *A* sells a plot of land to *B*. It is stated in the conveyance that there is a tenant-at-will on the land. After the sale is completed, it is found that the tenant had acquired a right of occupancy in the land; he is, therefore, not liable to be evicted. What is the remedy open to *B*? Discuss fully the principles of law involved in the case.

11. State the law relating to transfer of immoveable property by an unauthorized person who subsequently acquires interest in the property transferred.

12. Discuss the principles enunciated in—

*either.*

*Gokuldas v. Puranmal* (I.L.R. 10 Cal. 1035).

*Or.*

*Ma Yait v. The Official Assignee* (57 I.A. 10).

13. Do the following require registration?—

(a) Adoption deed, (b) authority to adopt by a non-testamentary instrument, (c) agreement to sell immoveable property by payment of Rs. 1,000 by way of earnest money.

14.

*Either,*

14. Is a document which is compulsorily registrable but which has not been registered admissible in evidence for any purpose?

Would a document which is not compulsorily registrable, but which has been registered, have precedence over an unregistered document relating to the same property?

*Or,*

A property sold was of a value less than Rs. 100 and the sale deed was not registered. The sale, however, was completed by delivery of possession. A suit was then brought by the vendor against the purchaser to recover possession of the property on the ground that the transaction was a usufructuary mortgage and not a sale. Was the sale deed admissible in evidence to show that the defendant was in possession not as a mortgagee but as a purchaser? Discuss.

## THIRD PAPER

**Real Property and Succession**

*The figures in the margin indicate full marks.*

*Candidates shall give their answers in their own words and reasons for their answers as far as practicable.*

## FIRST HALF

Examiners— { DR. S. K. GUPTA, M.A., B.L., B.LITT, PH.D.  
BAR-AT-LAW.  
MR. RAMENDRAMOHAN MAJUMDER, M.A., B.L.

1. Indicate, with the aid of illustrations, the distinction between corporeal and incorporeal hereditaments. Give a classification of the latter. 10

*Or,*

Explain *any three* of the following terms: (i) power of appointment, (ii) equitable waste, (iii) settlement, (iv) rent charge, (v) rights of common. 10

2. Give a short account of the progress of the right of testamentary transfer. 10

*Or,*

State the facts of, and give the ratio decidendi in, the case of *Keech v. Sandford*, 2 Wh. & L. 648. 10

3. What is meant by an 'entailed interest'? How is it (a) created, (b) barred, at the present day? 10

*Or,*

What restrictions, if any, exist, at the present day, in respect of conveyances of land to (a) corporations, (b) charities? 10

4. What are the implications of the maxim 'Once a mortgage always a mortgage'? 10

A sells his land to B for £2,000 reserving an option to repurchase the land within a year on payment of £2,000 with interest @ 6% per annum. A fails to pay within the year. Does A lose the land if he tenders the money with interest to B later on?

5. A testator bequeathed £10,000 to trustees to accumulate during the life of B until portions amounting to £20,000 which were charged on certain settled lands were paid off, B being tenant for life of the settled lands and the portions being sums payable to his younger children. B lived for more than 21 years after the death of the testator. Can the accumulations continue for the rest of the life of B? 10

## SECOND HALF

Examiners— { MR. M. N. GHOSH, M.A., B.L., BAR-AT-LAW.  
,, SADHANCHANDRA RAYCHAUDHURI, M.A., B.L.

1. Explain *any four* of the following terms: (i) testamentary guardian, (ii) codicil, (iii) administrator de bonis non, (iv) residuary legatee, (v) demonstrative legacy, (vi) ademption of legacies. 10

2. What are the requisites for the execution of an unprivileged will? How may an unprivileged will be revoked? 10

*Or,*

What is the difference between probate and letters of administration? On what grounds may a grant of probate be revoked or annulled? 10

3. Discuss the effect of the following bequests:— 10
- (a) A fund is bequeathed to A for his life and after his death to his daughters. A survives the testator. A has daughters, some of whom were not in existence at the testator's death.
- (b) A fund is bequeathed to A for his life, and after his death to B for his life, and after B's death to such of B's sons as will first attain the age of 24. B dies in the lifetime of the testator, leaving one or more sons.

Or,

Explain the difference between a vested interest and a contingent interest. 10

Discuss if the legacy in the following case is vested or contingent:—  
A bequeaths to B Rs. 5,000 a year upon his attaining the age of 18, and directs that the interest thereof shall be applied for his benefit until he reaches that age.

4. What are the rules of construction where a will purports to make two bequests to the same person? 10

5. State the facts and explain the principles laid down in:— 10  
*Bhagabati Barmanya v. Kalicharan Singh* (32 Cal. 992).

Or,

*Saulajaprasad Chatterjee and others v. Jadunath Bose* (21 C.L.J. 88).

#### FOURTH PAPER

### Contract and Torts

*The figures in the margin indicate full marks.*

*Only FIVE questions are to be attempted in EACH half.*

#### FIRST HALF

Examiners— { Mr. S. N. BHATTACHARYYA, B.A., BAR-AT-LAW.  
,, MUKUNDABEHARI MALLIK, M.A., B.L.

1. Define consideration with reference to— 10
  - (i) English law,
  - (ii) Indian law.
2. Discuss the capacity of a Corporation for entering into a contract. 10
3. What is 'Fraud'? Discuss the essential features of fraud. 10
4. A consigns 1,000 bales of cotton to B who has made advances to him (A) on such cotton and instructs B to sell the cotton and to repay himself out of the price the amount of his advances. A dies before the cotton is sold. Can B sell the cotton and repay himself out of the price after A's death? Give reasons. 10
5. What is the 'measure of damage' on breach of a contract? 10  
Discuss *Hadley v. Baxendale* (1854) 9 Ex. 354.
6. What is a Bailee? 10  
A hires a motor car from B for the express purpose of driving to Ranchi. A, instead of going to Ranchi, drives to Puri and without negligence on his part collides with a bullock cart and wrecks the car. Can B recover from A the value of the car?
7. Write short notes on:— 10
  - (a) *Dickinson v. Dodds* (1876) 2 Ch. D. 463.
  - (b) *Carlisle v. Carbolic Smoke Ball Co.* (1893) 1 Q.B. 256.

## SECOND HALF

Examiners— { Mr. S. P. MOOKERJEE, M.A., B.L., BAR-AT-LAW.  
 ,, J. N. MAJUMDAR, M.A., B.L., BAR-AT-LAW.

1. Discuss the rights of an unpaid vendor of goods. 10
2. Discuss the principles of vicarious responsibility. 10
3. Write short notes on:— 10
  - (a) Publication with reference to defamation.
  - (b) Private nuisance.
4. Poisonous berries were exposed without warning to all visitors to a public garden, children picked some of the berries and were poisoned.  
 Discuss the principles of law governing the liability, if any, of the authority in charge of the garden. 10
5. When is a man liable for damage committed by his animals? 10
6. Explain clearly what is meant by *actio personalis moritur cum persona*. 10
7. X, on entering a railway carriage, left his hand on the edge of the door. The guard with due warning shut the door and X got hurt. Is X entitled to any remedy?

Discuss the principles of law involved in the case.

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# Final Examination in Law

January 1935

FIRST PAPER.

*The figures in the margin indicate full marks.*

FIRST HALF.

Examiners— { MR. SACHINDRANATH MUKHERJEE, B.L.  
                  " MONINDRANATH BANERJEE, B.L.  
                  MUKUNDABEHARI MULLICK, M.A., B.L.

*Answer ANY FIVE of the following.*

1. With whom was the Permanent Settlement of 1793 concluded, and how did it affect their previous status? What were the rights reserved by Government in making that settlement? 10

2. Explain *any five* of the following expressions: Istimrari tenure, Khudkasht raiyat, Julkur, Chakran tenure, Malikana lands, Khas mahal, Jungleburi lease, Abwab. 10

3. Under what circumstances does the jurisdiction of a Civil Court arise in suits to annul revenue sales? Who are the persons who can maintain such suits? 10

4. An entire permanently settled estate owned jointly by A, B, and C was sold for arrears of revenue and purchased by D, who afterwards sold it to A. With rights did D and A respectively acquire as regards the annulment of encumbrances? What difference would it have made if D has set aside any encumbrances and then sold the estate to A? Discuss. 10

5. X, a Zemindar, created a Putni Taluk in favour of Z on the 1st of Baisakh 1338 B.S., on condition that Z should pay X Rs. 3,000 per annum in two equal *Kists*, payable on the 1st of Kartic and the 1st of Baisakh. Z has, since the creation of the Taluk, paid X only Rs. 1,500. What remedy has X in Baisakh 1340 against Z under the Putni Regulations to recover the balance of his dues? 10

6. Between Government on the one hand and the Zemindar and the Putnidar on the other, who do you think is entitled to subsoil minerals in the absence of any contract? Discuss. 10

7. 'The fish follows the river and the fisherman follows the fish.' Explain and discuss by giving illustrative examples, and refer to any leading case on the subject. 10

SECOND HALF

Examiners— { MR. M. N. GHOSE, M.A., B.L., BAR-AT-LAW.  
                  " SATISCHANDRA SINHA, M.A., B.L.  
                  BANKIMCHANDRA RAY, M.A., B.L.

*Answer ANY FIVE of the following.*

1. Define the terms 'landlord', 'tenant', 'tenure holder', and 'raiyyat', as used in the Bengal Tenancy Act.

All 'settled raiyyats' are 'occupancy raiyyats' but all occupancy raiyyats are not settled raiyyats. Explain with illustrations. 10

2. In what cases can a tenant be ejected for default in payment of rents? 10



3. Enumerate some instances in which the provisions of the Bengal Tenancy Act allow a party to go against the effect of a contract entered into by him as a free agent. 10

4. A, an under-riyat, has a right of occupancy in his holding M, held under B, his immediate landlord. A mortgages his holding to C. B's holding M is sold for arrears of rent and purchased by D. What is the position of each party after the sale? Give reasons for your answer. 10

5. State the requisites as prescribed in the Indian Limitation Act for acquiring a valid right to an easement of 'ancient light', and discuss the principle laid down in the Privy Council case of *Paul v. Robson*, L.R. 42 I.A. 180, which determines the extent of that right. 10

6. Discuss the principles laid down in *Manmathanath Mitra v. Rajeswar Roy Chowdhury*, L.L.R. 55 Cal. 355. 10

Or,

*Chandra Kanta Nath v. Amjad Ali*, I.L.R. 48 Cal. 783.

7. What is the procedure laid down in the Bengal Tenancy Act for annulling encumbrances?

Can the right be exercised by one of several joint purchasers? 10

## SECOND PAPER

*The questions are of equal value.*

*Answer ANY FIVE questions from EACH half.*

### FIRST HALF

Examiners—	{	Mr. AMIR AHMED CHAUDHURY, M.A., LL.B.,	BAR-AT-LAW.
		„ J. BAROOAH, Bar-at-Law.	
		„ HARIDEB CHATTERJEE, M.A., B.L.	

1. 'The Judicature Act, 1873, did not abolish the distinction between legal and equitable estates.' Explain this statement, and state briefly the effect of the Judicature Act upon the relations of common law and equity.

2. Explain and illustrate *two* of the following:—

(a) 'Equity acts *in personam*.'

(b) 'Equity will not suffer a wrong to be without remedy.'

(c) 'Equity looks to the intent, rather than to the form.'

3. Take the following cases and point out which create a trust, and which merely express a wish or desire, on the part of the grantor, to benefit the third person named: (a) 'I devise Blackacre to X in trust for Y'; (b) 'to X, hoping he will keep the estate in the family'; (c) 'to X, recommending that he dispose of it at death to Y and Z'; (d) 'the residue to X, my desire being that she shall distribute it as she thinks will be most agreeable to my wishes'.

4. 'As to executed trusts, equity follows the law and as to executory trusts, equity follows the intention.' Explain by giving examples.

5. What is a charitable trust? Give an instance of a trust which is neither charitable nor for the benefit of individuals. Is such a trust good, and, if so, can it be enforced?

6. *Delegatus non potest delegare*. Explain. Is there any exception to this general rule?

7. Explain the principle laid down in—

*either,*

*Pearymohan v. Monohar Mukherjee*, L.R. 48 I.A. 258;

*or,*

*Ram Coomar Kundu v. Macqueen*, L.R. I.A. Supp. Vol. p. 40.

## SECOND HALF

Examiners— { MR. NIRMALCHANDRA CHAKRABARTI, M.A., B.L.  
 „ A. RAHEEM, M.A., BAR-AT-LAW.  
 NARAINCHANDRA KAR, B.L.

8. A trustee paid £3,000 of trust money into his own account, and subsequently out of the whole mixed fund purchased in his own name an investment of the value of £1,500; he then drew and spent upon his own purposes the balance of the mixed fund.

Will the investment be considered as having been made with trust money or with the private funds?

Or,

A has a balance of £1,800 in his bank; he pays in £2,500 of trust money, and continues paying in money of his own and drawing money on his own account, paying in £1,300 and drawing £2,600. Does the rule in Clayton's case apply? Will the beneficiaries have a charge upon the whole balance of £3,000 for the whole of the trust money?

9. Explain the maxim that you may foreclose without redeeming but cannot redeem without foreclosing. On what principle is this maxim founded?

10. Any stipulation in a mortgage for a collateral advantage to the mortgagee beyond payment of his principal, interest, and reasonable costs, is bad.

Discuss, with reference to case law, to what extent this principle has been modified by the modern authorities.

11. The firm of A and B is voluntarily dissolved, and a new firm A and C is formed and carries on the business without giving proper notice to the world of the change. X contracts with the new firm, supposing that he is dealing with the old firm. Whom can he charge, and why?

12. On what principle does the Court grant a decree of specific performance? Will such a decree be granted in either of the following cases?—

(a) To sing at B's music hall for a specified fee on every week day in April, 1915, and not to sing during April at any other place of entertainment at which a charge is made for admission.

(b) To transfer to C at par 100 shares of £1 each fully paid in XYZ, Ltd., a private limited company.

Where a plaintiff cannot obtain such decree, what other relief, if any, can be obtained by him?

13. Write short notes on:—

(a) *executor de son tort*, (b) fraud upon a power.

14. Discuss the principles enunciated in—

*Stapilton v. Stapilton*, 1 At. K. 2.

Are the principles applicable in India?

Or,

To what extent have the principles formulated in *Maddison v. Alderson* (L.R. 8 A.C. 473) been incorporated into the law of British India?

## THIRD PAPER

The figures in the margin indicate full marks.

## FIRST HALF

Examiners— { MR. SITARAM BANERJEE, M.A., B.L.  
 „ RATANMOHAN CHATTERJEE, M.A., B.L.  
 „ A. S. M. AKRAM, M.A., B.L.

1. What is meant by 'evidence'? 10

Explain, with illustrations, the difference between *direct* evidence and *indirect* evidence.

Or,

The testimony of a witness must be on knowledge and not on belief or opinion. Does the Indian Evidence Act recognize any exceptions to this rule? 10

2. How far is a Court entitled to act on presumption?

Can any presumption be drawn against the prosecution in a criminal trial, if the prosecution does not call all relevant evidence? 10

Or,

Discuss the admissibility in evidence of judgments *in rem* and judgments *inter partes*. 10

3. What is the principle underlying the acquisition of ownership by possession? 10

Or,

Give some examples to show what is, and what is not, 'sufficient cause' within the meaning of Section 5 of the Indian Limitation Act for the purpose of extending the period of limitation for an appeal. 10

4. A witness is called to prove a transaction with a business firm by producing an entry in a book of account of that firm. How is the entry to be proved (i) when the witness did, and (ii) when he did not, write the entry himself? 10

5. A institutes a suit in a Court which has no jurisdiction to try it. During the pendency of the suit the statutory period of limitation expires. The suit is ultimately dismissed on appeal on the ground of want of jurisdiction. A thereafter files a fresh suit on the same cause of action. In computing the period of limitation for this suit, can he claim a deduction of the period during which the former suit was pending? 10

## SECOND HALF

Examiners— { MR. ANNADACHARAN KARKOON, M.A., B.L.  
 „ SURYAKUMAR AICH, B.L.  
 „ BYOMKESH BOSE, M.A., B.L.

6. *Res judicata* is sometimes treated as part of the doctrine of estoppel, but the two are essentially different. Explain. 10

Will the principle of *res judicata* apply as between co-defendants in a suit?

Or,

Explain the distinction between a *decree* and an *order*, and show how the question of appealability is affected thereby. 10

7. What is meant by equitable execution? Illustrate your answer by examples. 10

Or,

Describe the successive stages of a suit on a mortgage from its institution to the passing of the final decree for sale. 10

8. Distinguish between *revisional* and *appellate* jurisdiction.

What are the powers of revision of the High Court under Section 115 of the Code of Civil Procedure? 10

Or,

What is meant by the inherent power of a Court? Can a Court recall its own order? 10

9. State and explain the principles laid down in *Sarat Chunder Day v. Gopal Chandra Laha*, I.L.R. 20 Cal. 296, s.c. L.R. 19 I.A. 208. 10

10. What is meant by 'attachment'?

A attaches a certain property of X in execution of a money decree against X. Pending the attachment and before sale, another creditor of X, C, who also holds a money decree against him, applies for a rateable distribution of assets. X thereafter pays up A's decree out of Court, and the execution case is struck off on satisfaction. X then sells the property by private treaty to Y. Will the sale be binding on C? 10

#### FOURTH PAPER

*The figures in the margin indicate full marks.*

##### FIRST HALF

Examiners— { Mr. S. P. RAY, BAR-AT-LAW.  
                  „ BIRESWAR CHATTERJEE, M.Sc., B.L.  
                  „ ARUNCHANDRA BOSE, M.A., B.L.

1. Define any five of the following words and expressions, as used in the Indian Penal Code:— 10

Counterfeit; fraudulently; valuable security; injury; illegal; judge; court of justice; stolen property.

2. What are the ingredients of the offence of 'theft' as defined in the Indian Penal Code? 4

Discuss the validity or otherwise, as a defence to a charge of theft, of a claim of title to the alleged stolen property. 6

Or,

Distinguish between murder and culpable homicide not amounting to murder. 10

3. A, B, and C jointly attack D—A with a stick intending to cause simple hurt, B with a thick lathi intending to cause grievous hurt, and C with an iron rod intending to kill. D dies as a result of the beating. The medical opinion is that the death of D is due to the cumulative effect of the beating by all the three assailants. Discuss the criminal liabilities of A, B, and C for the beating of D. 10

Or,

A chased B with a dao in his hand, intending to cause grievous hurt to B. B escaped behind a screen. A struck at the screen with the dao, which cut through the screen and killed C, who happened to be standing behind it, unknown to A. Assuming that the injury to C was an accident, discuss the criminal liability, if any, of A. Would it have made any difference if A's intention were to kill B? 10

4. Discuss the principles laid down in any two of the following reported cases:— 10

(a) *Ganauri Lal Das v. Queen Empress* (I.L.R., 16 Cal. 206).

(b) *Amrit Lal Bose v. Corporation of Calcutta* (I.L.R., 44 Cal., 1025).

(c) *Arnold v. King Emperor* (I.L.R., 41 Cal., 1023).

5. Discuss briefly the circumstances under which the use of force is justifiable or excusable in English Criminal Law. 10

Or,

Discuss briefly the relation of madness to criminal responsibility in English Law. 10

## SECOND HALF

Examiners— { Mr. M. L. MITTER, M.A., B.L.  
 „ BIJANBEHARI MITTER, B.L.  
 „ PULINBEHARI MALLIK, M.A., B.L.

1. Explain *any five* of the following words and expressions, as used in the Code of Criminal Procedure:— 10

Charge; cognizable offence; judge; complaint; judicial proceeding; force; investigation; warrant case.

2. Can an accused person examine himself as a witness in his defence under the Indian Criminal Law? 2

Can he do so under the English Law? 2

What are the opportunities which an accused person has under the Code of Criminal Procedure to state personally his version of the case to the trial Court? 4

Is a trial, in which no such opportunity has been given to the accused person, legal? 2

3. A, B, and C are charged with having conspired to cheat members of the public, and they are individually charged with having cheated, in pursuance of the said conspiracy, several persons, on different dates, at different places within the jurisdiction of the trial Court. Can A, B, and C be jointly tried in one trial on all the aforesaid charges, namely, the charge of conspiracy and the several charges of cheating against them individually? Give reasons for your answer. 6

If, as a result of the joint trial, it is found that B was not a party to the conspiracy, can such a finding in any way affect the validity or otherwise of the joint trial? Give reasons for your answer. 4

Or,

A, B, and C are charged with having jointly committed thefts from four different houses, belonging to four different persons, at different places within the jurisdiction of the trial Court, on four different dates within one year. Can they be jointly tried in one trial on all the four charges of theft? Give reasons for your answer. 6

If it is found as a result of the trial that all three of them were not jointly concerned in all the four thefts, will such a finding in any way affect the validity or otherwise of the joint trial? Give reasons for your answer. 4

4. Describe briefly the procedures prescribed for trial of warrant cases and for preliminary enquiries in Sessions triable cases. 10

Or,

Describe briefly the procedure prescribed by the Code of Criminal Procedure for the empanelling of a Jury for trial in the Court of Session. 10

5. Write short notes on the following cases:— 10

(a) Case of William Palmer.

(b) Case of William Dove.

Or,

Briefly describe the course of a criminal trial in England. 10

**July 1935**

**FIRST PAPER.**

**Land Laws**

*The figures in the margin indicate full marks.*

**FIRST HALF**

Examiners— { DR. SASANKAJIBON RAY, M.A., B.L.  
MR. SYAMADAS BHATTACHARYYA, B.L.  
„ ARUNCHANDRA BOSE, M.A., B.L.

*Answer ANY FIVE of the following.*

1. Who are the parties affected by the Permanent Settlement of Bengal? How were the rights of the Government affected thereby? 10

2. 'Land washed away and re-formed on old-ascertained site is not land "gained". Such land belongs to the owner of the site.' Explain. 10

*Or,*

Where a portion of an estate, after being separated therefrom by violence of stream, is joined to another estate, the owner of the latter estate cannot claim as an accession the land so joined if there is evidence of identity. Explain. 10

3. What is the distinction between *niskar* and *lakheraj* lands? 10

What are Non-Badshahi *lakheraj* grants? How do you classify them? 10

4. What are the characteristic features of a *Putni* tenure? 10

A purchases a *putni* holding at a sale in execution of a money decree but has not his name registered in the landlord's *sherista*. Is A bound by a subsequent decree for arrears of rent obtained by the landlord against the registered *putnidar* and by the sale in execution of such decree? Discuss. 10

5. What are the conditions for the exercise of jurisdiction by Civil Courts in suits to annul Revenue Sales? 10

Can a *putnidar* institute a suit to annul a revenue sale? Give reasons for your answer. 10

6. What are the provisions of the Revenue Sale Law regarding the sale of an entire estate for arrears of revenue due on a separated share for which separate account has been opened under Sec. 11 of the Revenue Sale Law? 10

7. State and enunciate the principles laid down in *Mohesh Narain v. Nandbut Pathak*, 1 C.L.J. 437=32 Cal. 937. 10

**SECOND HALF**

Examiners— { MR. SURENDRAMOHAN GHOSH, B.L.  
„ SUBODHCHANDRA SEN, M.A., B.L.  
TARAKESWARNATH MITRA, M.A., B.L.

*Answer ANY FIVE of the following.*

1. How would you determine the status of a tenant, whether he is a *tenure-holder* or a *raiayat*? Discuss the law on the subject with special reference to *Debendra v. Bibhudendra*, 27 C.L.J. 548. 10

2. Under what circumstances can a landlord exercise the right of pre-emption? 10

What are the cases, if any, in which the right does not exist?

Or,

On the 14th of February, 1930, *L*, the landlord, made an application under Sec. 26F of the Bengal Tenancy Act claiming right of pre-emption. On the 15th February, 1930, i.e. within two months of the service of notice under Sec. 26c, the deposit was made. Is the Court entitled to entertain *L*'s application under such circumstances? Discuss. 10

3. What do you understand by 'protected interests' and 'encumbrances' under the Bengal Tenancy Act? 10

4. What is the legal effect of each of the following transactions?— 10

(a) An occupancy raiyat enters into a complete usufructuary mortgage of a portion of his holding for 20 years.

(b) A stipulation by a raiyat not to acquire an occupancy right in land.

5. What do you mean by 'abandonment' within the meaning of Sec. 87 of the Bengal Tenancy Act? 10

Before the amended Bengal Tenancy Act came into force, *T*, a tenant of a non-transferable occupancy holding, sold it to *P* with the reservation that *T* was to continue in possession of the homestead plot forming part of the holding. Does this amount to an abandonment so as to justify the re-entry of the landlord? Discuss.

6. Easements are rights in rem over another's property but all rights in rem over another's property are not easements. Explain with illustration. 10

7. Discuss the principle laid down in *Paul v. Robson*, 42 I.A. 180. 10

## SECOND PAPER

### Equity

*The figures in the margin indicate full marks.*

*Select ANY FIVE out of EACH half.*

#### FIRST HALF

Examiners— { MR. ASOKCHANDRA DATTA, BAR-AT-LAW.  
 „ J. BAROOAH, BAR-AT-LAW.  
 „ SUDHIRKUMAR BOSE, M.A., B.L.

1. Trace the growth of equity jurisdiction in England 10  
 2. State and explain the doctrine of Election. 10  
 3. Write a short essay on the doctrine of Constructive Notice, and discuss the case of *Le Neve v. Le Neve*, 2 Wh. and T. 175. 10

4. Write short notes on Covenants running with the land. Discuss the case of *Tulk v. Moxhay*, 11 Beav. 571. 10

5. A testator gave all his real and personal estate unto and to the absolute use of his wife, her heirs, executors, administrators, and assigns, 'in full confidence that she would do what was right as to the disposal thereof between the children, either in her lifetime or by will after her decease'. Discuss whether any trust is raised in favour of the children. 10

6. *X* takes a lease from *Y*. *Y* then sells the land to *Z*, who is a bonafide purchaser for value without notice of *X*'s lease. Is *X*'s leasehold interest good against *Z*? Discuss the rights of *X*, *Y*, and *Z*. 10

7. What was decided in— 10

*In re Halletts' Estate*; L.R. 18 Ch.D. 696?

## SECOND HALF

Examiners— { MR. P. MITTER, M.A., BAR-AT-LAW.  
 „ SUSIL K. BOSE, M.A., B.L.  
 „ P. K. DE, BAR-AT-LAW.

1. Discuss the principles laid down in *Maddison v. Alderson* L.R. 8 A.C. 473 and *Mahomed Ariff v. Jadunath Majumdar*, 58 I.A. 91. 10
2. 'Equity had come not to destroy the law but to fulfil it.' (*Maitland*.) Explain. 10
3. A contracts to sell land to B for Rs. 5,000. B takes possession of the land. Afterwards A sells it to C for Rs. 6,000. C makes no enquiry of B relating to his interest in the land. Is B entitled to ask for specific performance of the contract against C? 10
4. Explain the doctrine of *cy pres*. 10
5. Discuss the case of— 10  
*Pearymohan Mukherji v. Monohar Mukherji*, 48 I.A. 258=48 Cal. 1019.
6. Write a short note on the doctrine of Marshalling of Assets. 10
7. 'A trustee must not delegate his trust.' Explain. 10

## THIRD PAPER

## Evidence and Civil Procedure

*The questions are of equal value.*

## FIRST HALF

Examiners— { MR. A. K. CHANDA, BAR-AT-LAW.  
 „ NIRMAL K. SEN, M.A., B.L.  
 RATANMOHAN CHATTERJI, M.A., B.L.

*Answer ANY THREE questions.*

1. Distinguish between 'may presume', 'shall presume', and 'conclusive proof', giving examples of each.  
 How can the legitimacy of a child born in wedlock be disproved?
2. When is the conduct of a party to a suit or the conduct of a person an offence? Against whom is the subject of a proceeding relevant? Examine the statement 'Silence gives consent'.
3. Under what provisions of the law can you prove dying declaration, first information, photograph, custom?
4. Discuss the scope and limit of examination-in-chief, cross-examination, and re-examination.

*Answer ANY TWO questions.*

5. In what cases is the plea of limitation not available?  
 A deposits a sum of money with B and goes to England. He returns after 12 years, and 7 years thereafter claims the money from B. What must B allege and prove to defeat A's claim on the ground of limitation?
6. Discuss in detail the circumstances in which the period of limitation for recovery of a debt may be extended.
7. Examine the maxim 'possession follows title' with reference to leading cases on the subject.



## SECOND HALF

Examiners— { MR. GIRIJAPRASANNA SANYAL, M.A., B.L.  
 „ B. MONDAL, B.A., BAR-AT-LAW.  
 „ RABINDRANATH CHAUDHURI, M.A., B.L.

1. Trace succinctly, stage by stage, the course of a suit as it proceeds from institution to decree.

A suit is brought against A and B for the recovery of damages for a tort committed by them jointly, and also for an entirely distinct and separate tort committed by B alone. Is the suit maintainable? Give reasons for your answer.

2. State the rule of *res judicata*. Does it make any difference in its application that the decision in the former suit had been given on a mixed question of law and fact or on a pure question of law? Give reasons for your answer.

Or,

When does a matter decided in a suit become *res judicata* in a subsequent suit between parties who had been co-defendants in the former suit?

3. What are the different kinds of limitation to the jurisdiction of a Court contemplated by the Code of Civil Procedure?

Specify, with reasons, the Court in which you should institute (1) a suit for the recovery of mesne-profits of immoveable property, (2) a suit for the specific performance of a contract of sale of immoveable property, and (3) a suit for the recovery of the unpaid purchase-money on a sale of immoveable property.

Or,

Explain, with illustrations the distinction between a preliminary and a final decree. Name the suits in which these two decrees must be passed.

A preliminary decree is passed in a suit and is followed by a final decree. An appeal is preferred against the preliminary decree, but none against the final one. The appeal succeeds, the preliminary decree being set aside and the suit dismissed. How is the final decree affected by this result? Would it matter if an appeal had been taken from the final decree as well? Give reasons for your answer.

4. Enumerate the grounds on which a sale of immoveable property in execution of a decree may be set aside. Does an appeal lie from an appellate order setting aside or refusing to set aside such a sale on the ground of fraud? Give reasons for your answer.

Some immoveable property is sold in execution of a decree and purchased by the decree-holder. The decree is afterwards set aside at the instance of the judgment-debtor. Does the sale fall with the decree? Would a different result ensue if the purchaser were a stranger instead of being the decree-holder? Give reasons for your answer.

5. Write short explanatory notes on any five of the following:—

(1) Abatement, (2) Award, (3) Discovery, (4) Foreign judgment, (5) Inherent powers, (6) Interpleader, (7) Miscellaneous proceedings, (8) Precept, (9) Rateable distribution, (10) Restitution, (11) Right to begin, (12) Substituted service.

**FOURTH PAPER**  
**Law of Crimes and General Principles of**  
**Criminal Procedure**

*The questions are of equal value.*

**FIRST HALF**

Examiners— { **MR. MANINDRANATH BANERJI, B.L.**  
 „ **MONI BANERJEE, BAR-AT-LAW.**  
 „ **BHOLANATH RAY, M.A., B.L.**

1. (a) Give a short account of the organization of superior Criminal Courts in England.

*Or,*

(b) What, according to the law of England, are the conditions of criminality?

2. (a) State the nature and extent of the right of private defence.

Has a wrong-doer any right to resist the undue or excessive exercise of the right of private defence?

*Or,*

(b) Distinguish between murder and culpable homicide not amounting to murder.

A abets a lunatic to kill B. The lunatic kills B. What offence, if any, is committed by either?

3. (a) What are the facts of *Q. E. v. Abbas Ali*, I.L.R. 25 Calcutta, 512? What new points were settled in this case, and which case did it overrule?

*Or,*

(b) By section 34 of the Indian Penal Code, 'when a criminal act is done by several persons, in furtherance of the common intention of all, each of such persons is liable for that act in the same manner as if it were done by him alone'.

What view of the meaning of this section was adopted by Stephen J. in *Emp. v. Nirmal Kanta Roy*, I.L.R. 41 Calcutta, 1072, and on what grounds was this view held to be not correct by the Privy Council in *Barendra Kumar Ghosh v. King Emperor*, I.R. 52 Indian Appeals, 40?

4. A, B, and C are jointly charged with criminal conspiracy. The jury finds B and C not guilty, but A guilty, the evidence showing that A conspired with either B or C, but not with each. B and C are acquitted. Can a conviction be sustained against A?

5. A, a candidate at a University examination, having duly obtained permission to appear at the examination, sits for it for two days, and then gets a friend B to sit for him for the rest of the examination, pretending to be A. What offence or offences, if any, could either be charged with?

**SECOND HALF**

Examiners— { **MR. CHANDRABHUSHAN BANERJEE, M.A., B.L.**  
 „ **PULINBEHARI MALLIK, M.A., B.L.**  
 „ **S. P. RAY, BAR-AT-LAW.**

1. (a) 'The entire absence of cross-examination in a French Court is one of the most striking differences between French and English procedure.' (Stephen.)

Comment on this statement.

*Or,*

(b) Write a note on Sir Alexander Cockburn's cross-examination of Smith in Palmer's trial.

2. (a) What is the object of framing a *charge* in a criminal trial? Is the trial vitiated by an error in the charge?

Or,

(b) At a criminal trial the depositions of some witnesses were read over to them while further evidence was being recorded, and in some cases the depositions were handed over to the witnesses to read to themselves.

What provisions of the Code of Criminal Procedure, if any, were violated thereby, and what would be the effect of such violation on the trial?

3. (a) What is the general rule regarding the place of trial of an offence under the Code of Criminal Procedure?

What is the effect of a trial being held in a wrong jurisdiction?

Or,

(b) On an appeal from an order of acquittal, what are the powers of the appellate Court to interfere with findings of fact of the trial judge?

4. State where *A* should be tried in *any three* of the following cases :—

(a) *A* put *B* in fear of injury at Bombay and thereby induced *B* to deliver property to an agent of *A* at Allahabad in the course of a railway journey from Bombay to Howrah.

(b) *A*, residing at Rangoon, writes and posts a letter to *B*, residing at Calcutta, whereby he instigates *B* to commit a murder at Chittagong.

(c) *A* kidnaps *B* from her father's house at Bankura, takes her to Hooghly, then to Jessore, and finally to Calcutta, where he keeps her concealed.

(d) *A*, an agent, sends accounts from Dacca to *B*, his principal, at Calcutta. The accounts are false, and disclose criminal breach of trust.

5. A person is tried for murder by a Sessions Judge sitting with a jury of seven. The jury find him guilty by a majority of six to one, upon which the Sessions Judge convicts him and sentences him to death. The conviction and sentence are confirmed by the High Court on appeal. On appeal to the Privy Council, a point is taken on behalf of the accused that one of the jurors did not know sufficient English to follow the addresses of the pleaders or the judge's charge to the jury or so much of the evidence as was given in English. Is this a good ground of appeal?

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# M. S. Examination,

1935

## SURGERY

### FIRST PAPER

Examiners— { DR. L. M. BANERJEE, M.S., F.R.C.S.  
LT.-COL. K. K. CHATTERJEE, F.R.C.S.  
LT.-COL. F. J. ANDERSON, F.R.C.S., I.M.S.

1. Discuss the principles that are followed in the operation of tendon transplantations. How would you proceed to investigate and select the appropriate tendons in a case of radial paralysis involving only the extensors of the fingers.

2. Give in detail the recent contributions to the aetiology and treatment of traumatic surgical shock.

3. Write a short description of the present position of surgery in the treatment of tuberculosis of the lungs (a description of artificial pneumothorax is not required).

4. Describe acute arthritis in children with special reference to the treatment of such a condition in the hip joint.

### SECOND PAPER

*The questions are of equal value.*

S.R., H.M., aged 35 was admitted into hospital for numbness and pain in the fingers.

*History of present condition*—Three to four months ago numbness and burning pain commenced in fingers. Two weeks later the finger tips began to get black and has progressed since. Ten days before admission the toes of the right foot began to feel cold and numb.

There has been intermittent claudication in the right leg and forearms of both sides. He is a heavy smoker of 'bidis' (বিড়ী)।

*Previous history*—Kala-azar 15 years ago—no other disease. Family history nil.

*On admission*—The patient did not appear very ill but had an anxious expression. The temperature was 100.1° F., pulse 96. Weight 6 stones 7 lbs.

*Rt. hand*—The tips of the index, middle and ring fingers are in a state of dry gangrene. The other fingers of the palm are not involved.

*Left hand*—The index finger shows dry gangrene as far as the second phalanx. The rest of the finger is tender on palpation. There is a red flushed oedema of the hand. Sensation is not impaired except over the gangrenous areas of the hands. The radial and ulnar pulses of both wrists are well felt. There is a slight thickening of the radial arteries but the brachial arteries are not thickened. The right radial pulse varies in volume.

*Feet*—The right toes are cold compared with the left but sensation is unimpaired. No pulse is felt in the anterior or posterior tibial arteries on either side. The posterior tibial arteries are thickened behind the medial malleoli.

*Heart*—The first sound at the apex is weak but there is no accentuation of the aortic second sound. The blood pressure is 105/75 m.m. of Hg.

*Urine*—does not contain sugar or albumen.

*X-Ray Examination*.—No calcareous changes are seen in the axillary brachial or femoral arteries.

Nasal smear is negative for *Sepra Bacillus*.

Wasserman's reaction is slightly positive.

Blood calcium is 10 mgrm per cent.

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## SURGICAL ANATOMY AND PATHOLOGY

### THIRD PAPER

1. Discuss fully the pathology of Calcification, Decalcification and Ossification in trauma and diseases of bones.
  2. Discuss the pathological conditions for which Splenectomy may be performed.
  3. Describe the posterior fossa of the skull with special relation to the structures which may be involved in injury or disease mentioning briefly the symptoms arising as a result of lesions in them.
  4. Describe the Levator ani muscle.
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## UROGENITAL SURGERY

1. Describe fully the various developmental and anatomical anomalies of the prostate gland resulting in pathological condition. Discuss the merits of the different methods of surgical treatment in such cases.
  2. Discuss in detail the different conditions which would indicate the procedure of renal sympathectomy. Describe the operation in detail.
  3. Describe the treatment in detail of chronic gonorrhœa and its complications in the male.
  4. Discuss the aetiology of calculus formation in the kidney.
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**D. P. H. Examination,**  
**May, 1935**

**BACTERIOLOGY AND PARASITOLOGY**

*Examiner*—MR. C. C. BOSE, B.A., M.B.

*The figures in the margin indicate full marks.*

1. How would you examine a sample of milk for cleanliness of its method of production and care with which it has been kept?

Mention the more important organisms which are conveyed to man through milk and the way in which they get into the milk supply. 14

2. Name the mosquitoes which are principally responsible for the transmission of diseases to human beings. Give the habits and life-history of any one of these. 12

3. Describe the morphology and cultural characters of *Corynebacterium diphtheriae*.

What investigations would you like to do to identify carriers of diphtheria? 12

4. Write brief notes on the following:— 12

(i) Schizogony of *P. falciparum*.

(ii) Agglutinins.

(iii) Life-history of *Echinococcus granulosus*.

*Or,*

(i) Sporogony of *P. vivax*.

(ii) Life-history of *Tænia saginata*.

(iii) Bacteriolysis.

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**CHEMISTRY AND PHYSICS, ETC.**

*Examiner*—MR. B. B. BRAHMACHARI, M.B.

*The questions are of equal value.*

*Only FOUR questions are to be answered ; Question 1 is compulsory.*

1. Describe a Katathermometer. What quality of the air is measured by it? How would you measure it with the instruments? How does this quality of the air influence health? On what conditions of the air does this quality depend?

2. What are normal and molecular solutions? How would you prepare a decinormal solution of potassium permanganate? What precautions would you take in stocking the solution? How would you check its strength? Give equations of all the reactions, and derive the quantity of the permanganate from them.

3. The water of a newly sunk well is found to contain nitrates and 6 parts per 100,000 of chlorine as chlorides; examination for nitrates shows 0.4 part per 100,000 of nitrogen in this form. There is a cesspool at some distance from the well. Discuss suitability of the

water for drinking. What further observations and tests would you make to arrive at your opinion?

4. How does 'atta' differ from 'maida' (wheat flour)? How would you estimate the total protein of a sample of atta? State the reactions of the different stages of the process. A sample of atta is found to contain 3 per cent. of gluten, the ash calculated on the dried substance is 2.5. Give your opinion on it. What further tests will you make to support your opinion?

5. What are the different methods for manufacturing vinegar? Give the chemical history of its characteristic acids. What are the standards for vinegar? What are its chief adulterants? How would you detect mineral acid in it? If it contains arsenic, how would you detect and estimate it? How much of arsenic would you permit in vinegar?

## HYGIENE AND SANITATION, INCLUDING SANITARY ENGINEERING

Examiner—SIR HASSAN SUHRAWARDY, Kt., O.B.E., LL.D., M.D.,  
F.R.C.S.I., D.P.H.

*The questions are of equal value.*

*All questions to be answered.*

1. Discuss modern ideas regarding ventilation.

What diseases are caused by living in badly ventilated houses? What means have been found to be most effective in the prevention of such diseases?

2. Railway colonies are situated in the following three areas:—

(a) In a deltaic part of Bengal.

(b) In a submontane region of the United Provinces subject to flooding from rivers and subsequent stagnation.

(c) In a hilly forest tract in Chota Nagpur with ravines.

These areas have proved to be malarious. Describe the engineering and anti-mosquito measures that you would suggest to be undertaken in each instance.

3. There has been an outbreak of acute diarrhoea and vomiting with collapse amongst the general population of a small town. Describe how you would investigate the outbreak in order to determine the cause.

## EPIDEMIOLOGY AND INFECTIOUS DISEASES

Examiner—MR. R. B. KHAMBATA, D.P.H., L.R.C.P.

*The questions are of equal value.*

*All the THREE questions are to be answered.*

1. The necessity of having an Infectious Diseases Hospital in Calcutta is well recognized. You are asked to select a site and draw up plans for construction of a building on modern sanitary principles for such a hospital. The population of Calcutta was 1,196,734 in 1931 and there were 1,765 deaths from cholera, 1,818 deaths from smallpox, 729 deaths from typhoid fever, and 560 deaths from cerebro-spinal meningitis during the same year.

2. Discuss the ætiology of 'epidemic dropsy'. It has been reported that many cases are occurring in villages of a Bengal district. Describe how you would investigate the outbreak with a view to determining the causal factors.

3. What is the meaning of 'terminal disinfection'? Discuss its use, and give examples where you would carry out terminal disinfection. Give examples also when 'current disinfection', i.e. where disinfection is done during the course of the disease, is carried out.

## SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATION

Examiner—DR. K. V. KRISHNAN

*The questions are of equal value.*

1. Define arithmetical mean, weighted mean, median, mode, standard deviation, probable error.

From the following figures of influenza mortality in a town, for the period 1911 to 1925, calculate the mean and state the median. Discuss whether the mean or the median is the more useful in this particular instance as a representation of the mortality experience of the community from influenza:—

1911—57	1918—8,008
1912—68	1919—7,237
1913—58	1920—148
1914—46	1921—296
1915—47	1922—75
1916—59	1923—36
1917—82	1924—49
	1925—51

2. Describe briefly the duties of a port health officer in India.

*Or,*

3. Describe very briefly the part that India has played within recent years in International Health Relations.

4. Outline the legislation in India to protect the health of men, women, and children working in factories and mines.

5. Submit a scheme, for starting a temporary central delousing depot in a town of 50,000 inhabitants where an epidemic of relapsing fever is prevalent, under the following heads:—

(a) Plan of depot, (b) sanitary arrangements, (c) staff, (d) equipment.

**September, 1935**

PART I.

## BACTERIOLOGY AND PARASITOLOGY

Examiner—MR. C. C. BOSE, B.A., M.B.

*The figures in the margin indicate full marks.*

1. Describe the organisms which give rise to bacillary dysentery in man. How would you isolate them from the feces of a suspected dysentery case? 14



2. What bacteriological examinations would you do to test the purity of the water supply of a town? 12

What evidences will lead you to suspect a probable contamination with sewage matter?

3. Describe the morphology and life history of the parasite of Quartan fever. 12

4. Write brief notes on:— 12

- (i) Rabies virus,
- (ii) Complement fixation,
- (iii) *Xenopsylla cheopis*.

Or,

Write brief notes on:—

- (i) Bacterial toxins,
- (ii) Filtrable viruses,
- (iii) The transmission of relapsing fever.

## CHEMISTRY, PHYSICS, ETC.

Examiner—MR. B. B. BRAHMACHARI, M.B.

*The questions are of equal value.*

1. Describe briefly the different kinds of thermometer that are used for meteorological purposes. What are the advantages of mercury as a liquid for thermometers? How is an alcohol thermometer graduated?

2. How is lead acted upon by different kinds of natural water? What steps would you take to prevent such action? What is the permissible limit for the metal in drinking water? A sample of water is suspected to contain lead. How would you detect and estimate it?

3. A sample of milk sent to you for analysis under the Food Adulteration Act is found to be decomposed. How would you estimate the fat and the solids, not fat, that were in the sample in its fresh condition? Can you test the genuineness of the milk by any other method?

4. What are alcohols? What is the characteristic alcohol of the wines? How is it formed? What other products of fermentation and oxidation do you get in wines and spirits? How would you determine the quantity of the alcohol in a sample of whisky? How would you express the result in terms of the proof spirit?

## PART II

### HYGIENE AND SANITATION

Examiner—SIR HASSAN SUHRAWARDY, Kt., O.B.E., LL.D., M.D.,  
F.R.C.S.I., D.P.H.

*The questions are of equal value.*

1. Discuss the measures that have been proposed to deal with venereal diseases in various countries. Discuss briefly how far such measures are applicable to present conditions in India.

2. What are the chief points to be considered in building a dwelling house from the point of view of hygiene and Public Health?

3. Describe in detail the methods of disinfection you will adopt in the following cases:—

- (1) Water supplies—
  - (a) ground tank,
  - (b) surface well,

- (c) a filtered water plant,  
which are suspected of having been infected with pathogenic germs such as Typhoid or Cholera.
- (2) A cowshed in which a carcass of an ox dead of anthrax is lying.
- (3) A railway carriage in which a smallpox case has travelled.
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## EPIDEMIOLOGY AND INFECTIOUS DISEASES

*Examiner—MR. R. B. KHAMBATA, D.P.H., L.R.C.P.*

*The questions are of equal value.*

1. Discuss the phenomena of 'anaphylaxis' and 'allergy', their mechanism, and the characteristics of 'anaphylactic shock'. Discuss the practical bearings of anaphylaxis upon the treatment of disease in the human subject.
  2. Several cases of sore-throat accompanied by high fever have occurred in a boarding school in the hills. What methods would you adopt to arrive at an early and accurate diagnosis and to prevent its spread with a view to stamping out the disease?
  3. Cholera is known to occur in epidemic form in Bengal usually in the month of April and again in the month of November. Discuss briefly the factors which enter into the causation of these two, 'maxima'. What measures of prevention would you advise District Boards and Municipalities to take during the epidemic periods and also during the interval?
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## SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATION

*Examiner—DR. K. V. KRISHNAN*

*The questions are of equal value.*

1. Describe the method of statistical measurement of the influence of occupation on mortality. What is the method used in England? Does it give an absolute measure of the influence of occupation alone? Illustrate, with examples, the effect of occupation on tuberculosis.
  2. State the provisions of law relating to the sanitary control of festivals. Submit proposals for the sanitary control of a large festival in a town on the bank of a river attracting over a lakh of pilgrims.
  3. What powers has a local authority in Bengal, in a municipal area outside Calcutta, for the control of Malaria? Do you consider these powers adequate? If not, what additional powers would you grant?
  4. Give a very brief history of the progress of public health administration in India, mentioning the important landmarks in its development.
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# Preliminary Scientific M. B. Examination

April, 1935

## CHEMISTRY

Examiners { Mr. BENIMADHAB CHAKRABARTI, I.M.S.  
Prof. JNANENDRANATH MUKHERJI, D.Sc.  
Dr. MD. QUDRATI KHUDA, D.Sc.(LOND.)  
Mr. M. K. SEN, M.Sc.

### Inorganic

*Only THREE questions are to be attempted in EACH half.*

*The questions are of equal value.*

#### FIRST HALF

1. Give a resumé of the ionic theory, and illustrate in this connection what is meant by (a) an acid, (b) a base, (c) a neutral salt, (d) an acid salt, and (e) a weak electrolyte.

2. Some clean sand was intimately mixed with powdered sodium carbonate and the mixture was strongly heated. The mass was cooled and diluted with water and then acidified very slowly with a dilute solution of hydrochloric acid.

What products would you get, and what *method* will you suggest for their separation?

3. What is hydrogen peroxide? How will you proceed to prepare it in a pure condition? What are the reactions by which you can characterize it, and how do you think it differs from ozones?

4. What is coal gas? How is it prepared? State its constituents, properties, and uses.

#### SECOND HALF

1. Make a comparative statement regarding the properties and reactions of arsenic, antimony, and bismuth. How do you justify the inclusion of these three elements in the same group?

2. What tests do you propose to make in order to satisfy yourself that a given sample of water is fit for drinking purposes?

3. How will you proceed to prepare a sample of pure sulphuric acid in the laboratory? What will happen if you heat sulphuric acid with (a) mercury, (b) potassium chloride, and (c) charcoal?

4. What are the following, and how are they prepared?—

(a) calcium hypophosphite, (b) calomel, (c) milk of magnesia, (d) lunar caustic.

Indicate their uses, if any.

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## Organic

*The questions are of equal value.*

### FIRST HALF

1. Explain, with illustration, the different types of isomerism you have met with in organic chemistry.
2. What are the characteristic differences between saturated and unsaturated hydrocarbons? Give two examples of each. Under which of these groups would you include benzene?
3. How do you distinguish fats from oils? Can you suggest some method for the conversion of the latter into the former? How can you prepare soap in pure condition?
4. The three hydrogen atoms of a methane molecule are replaced by three different groups. In what respects will this new substance differ from other substituted methane derivatives? Can you suggest a method for preparing a compound of the type mentioned above?

### SECOND HALF

1. Mention a typical compound of each of the following types of organic compounds which is of importance in medicine: ester, acid, aldehyde, purine, and oil.  
Describe their properties. Give their chemical formulæ wherever possible.
2. Enumerate the reactions by which cane-sugar may be differentiated from grape sugar.  
In what respects does cane-sugar differ from another disaccharide such as lactose?
3. What methods will you adopt for the preparation of the following in pure condition: (a) iodoform, (b) citric acid, (c) aspirin, (d) synthetic oil of wintergreen?
4. How will you proceed to test for quinine in a given sample? What is the source from which this substance is prepared? How is it isolated in pure condition? What are the common impurities that accompany it?

## PHYSICS

<i>Examiners-</i>	{	Mr. T. D. KAR, M.A.
		Dr. M. M. RAY, D.Sc.
		Mr. NIBARAN CHANDRA RAY, M.A.
		Dr. SNEHAMAY DATTA, D.Sc.

*The questions are of equal value.*

*Answer ONE question from each of the Groups A and C, and TWO questions from each of the Groups B and D.*

### GROUP A.

1. Describe the construction and explain the theory of the mercury barometer. Obtain an expression for the temperature correction.

2. Prove the formula  $PV=RT$  in the case of osmotic pressure. Is  $R$  an absolute constant for different masses and for different solutes?

Calculate the value of  $R$  for an aqueous solution of 5 grams of glucose ( $M=180$ ).

#### GROUP B.

3. Give Helmholtz's classification of the principal vowels. Explain in a general way how the mouth cavity is regulated to pronounce the different vowels.

4. What is heat of combustion of a substance? Describe an accurate method for finding the heat of combustion of a solid, deducing the formula.

5. Give a neat sectional diagram of the compound microscope, and explain the functions of its parts. Find an expression for its magnifying power.

#### GROUP C.

6. Define the focal length and the power of a lens. Explain any accurate method for finding the focal length of a thick convex lens, giving a neat diagram and deducing the formula to be used.

7. Explain the construction of Nicol's prism. How can you test whether a beam of light is polarized or not, with its help?

#### GROUP D.

8. Describe the potentiometer, and clearly explain how it can be used for the accurate measurement of the E.M.F. of a cell and the resistance of a coil.

9. What do you understand by the Hydriion concentration and the pH of a solution? Explain the electrometric method for finding the pH of a solution.

10. Describe Ruhmkörf's Induction Coil, giving a neat diagram and explain its action. How can you get unidirectional current from it?

## BOTANY

Examiners-- } DR. SAHAYRAM BOSE, M.A., PH.D.  
MR. SAILESWAR MOOKERJEE, L.M.S.  
MR. K. P. BISWAS, M.Sc.  
DR. S. HEDAYETULLAH, M.A., PH.D.

*The figures in the margin indicate full marks.*

#### PART I.

1. What is inflorescence? Distinguish between *umbel* and *corymb*; *helicoid* and *scorpioid* cymes. Give examples and sketches. 50

*Or,*

2. Describe the N.O. Gramineæ. Give formula and diagrams of floral parts. 50

#### PART II.

1. Describe the structure, distribution, and function of Stomata. 50

*Or,*

2. Describe the structure of a dicotyledonous root before and after secondary growth. Illustrate with sketches. 50

#### PART III.

1. Describe the process of respiration in green plants. Distinguish between aerobic and anaerobic respiration. 50

- Or,*
2. What are the various kinds of growth-movements in plants? 50

#### PART IV.

1. Describe a fern prothallus, and state its relation in the life-history of a fern plant. 50

*Or,*

2. Describe the process of sexual reproduction in *Muco.* and *Spirogyra.* 50

### ZOOLOGY

Examiners— } DR. HIMADRIKUMAR MUKHERJEE, D.Sc.(LOND.), D.I.C.  
MR. NRIPENDRANATH MOOKERJI, M.B.  
DR. S. L. HORA, D.Sc.  
TARAKNATH PODDAR, M.Sc., M.D.

*The questions are of equal value.*

*Two questions to be attempted from each part.*

*Illustrate your answers with diagrams as far as possible.*

#### FIRST PART

1. State what you know of the principal differences between the living and non-living matter.
2. Describe the function and formation of Allantois in Chick.
3. Write what you know of Mendel's law.

#### SECOND PART.

1. Compare the modes of reproduction in *Paramecium* and *Vorticella*.
2. Illustrate alternation of generation in the life-history of *Obelia*.
3. Make a sketch of the reproductive system of the earthworm (*Pheretima*) and label the parts.

#### THIRD PART.

1. Write short notes on *any five* of the following:—

- (a) Connective tissue.
- (b) Trophozoite stage of monocyctis.
- (c) Cnidocil.
- (d) Typhlosole.
- (e) Cyclops.
- (f) Notochord.
- (g) Metamorphosis.

2. Describe the digestive system of Cockroach.
3. Give the general character of the *Phylum Mollusca*.

#### FOURTH PART.

1. Compare the respiratory system of Fish with that of Toad.
2. Describe the heart of Guineapig.
3. Give in a tabular form the differences between the poisonous and non-poisonous Snake.

November, 1935

## CHEMISTRY

Examiners: } Mr. BENIMADHAB CHAKRABARTI, L.M.S.  
 } M. K. SEN, M.Sc.  
 } Dr. SUDHAMAY GHOSH  
 } S. N. RAY, PH.D.(CANTAB.)

## Inorganic

*The questions are of equal value.*

*Only THREE questions are to be attempted in EACH half.*

## FIRST HALF

1. State Gay Lussac's Law of gaseous volumes and Avogadro's hypothesis. Explain how the latter has been used in the determination of molecular weights.
2. What are the sources of Iodine in nature? Describe briefly a method used for the isolation of this element in a pure state. What is the action of iodine on (a) caustic soda, (b) sodium thiosulphate? Give equations.
3. Describe the allotropic modifications of phosphorus. How is yellow phosphorus prepared? How would you detect traces of free phosphorus?
4. What do you consider to be the most important salts of mercury? Give the preparation, properties, and tests for any two of them.

## SECOND HALF

1. In what forms does oxygen occur in nature? State briefly how oxygen can be prepared in a fairly pure condition (a) from air, (b) from water, fully explaining the principle involved in the former process. What impurities are likely to be present in the samples from each source? State the important uses of oxygen.
2. What is hydroxylamine? How is it prepared? Give its characteristic properties and uses.
3. How would you prepare the following from calcium carbonate: (a) Bleaching powder, (b) Plaster of Paris, (c) Anhydrous calcium chloride? State the properties and uses of each.
4. What is white arsenic? How is it prepared? State what you know about its solubility in (a) water, (b) alkali, (c) acid. What is the action of nascent hydrogen on arsenic salts in acid solution, and how can you detect the product formed?

## Organic

*The questions are of equal value.*

*Only THREE questions are to be attempted in EACH half.*

## FIRST HALF

1. How can you prove the presence of sulphur in an organic compound? Describe briefly the method of estimating sulphur in an organic compound.

0.5 gram of a substance gave 1.8822 grams of barium sulphate. What is the percentage of S in the compound? ( $\text{Ba}=137.4$ ;  $\text{S}=32$ .)

2. Explain the process of fermentation. Enumerate the different enzymes necessary to convert starch into ethyl alcohol, clearly explaining their specific action in each stage. What is fusel oil?

3. Write short notes on: (a) Osazones, (b) Fehling's solution, (c) Molisch's reaction, (d) Mutarotation, (e) Dextrin.

4. What are the usual sources of glycerol? How is it prepared on a large scale? State its properties, tests, and uses.

#### SECOND HALF

1. Enumerate the methods by which benzaldehyde may be prepared. Mention the chief differences in chemical behaviour exhibited by (a) Phenols and Aliphatic Alcohols, (b) Aromatic Aldehydes and Aliphatic Aldehydes.

2. Starting from ethyl alcohol, how can you prepare the following substances in the laboratory: (a) Chloral hydrate, (b) Acetone, (c) Ethyl acetate? State the uses of these compounds.

3. How will you proceed to isolate the alkaloids present in *Nux Vomica* seeds? What are the properties, uses, and tests of these alkaloids?

4. How is uric acid prepared? Describe its properties and tests.

#### PHYSICS

Examiners --  $\left\{ \begin{array}{l} \text{MR. T. D. KAR, M.A.} \\ \text{DR. M. M. RAY, D.Sc.} \\ \text{MR. NIBARANCHANDRA RAY, M.A.} \\ \text{DR. SNEHAMAY DATTA, D.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Answer ONE question from each of the Groups A and B and TWO questions from each of the Groups C and D.*

#### GROUP A

1. Define surface tension. How does it vary with the temperature of the liquid, and on what other factors does it depend?

Describe the capillary tube method of finding the surface tension of a liquid, and deduce the formula.

2. Define coefficient of viscosity.

On what different factors does the volume of a liquid flowing per second through a capillary tube depend?

Show how the coefficients of viscosity of two liquids can be compared with a viscosimeter, giving the precautions to be taken.

#### GROUP B

3. State the laws of vibration of a stretched string. Show clearly how these laws can be verified with the sonometer.

4. Describe an arrangement for finding the freezing point of a solution.

The freezing point of human blood serum is  $-0^{\circ}56$  C. Calculate its osmotic pressure if the coefficient of molecular depression for water is  $18^{\circ}7$  C.

#### GROUP C

5. Describe the spectroscope, and explain its working adjustments. How will you calibrate the instrument for wavelength determination?

6. Explain the terms: polarisation, rotatory polarisation, and specific rotation.

Explain the functions of the different parts of the Polarimeter, giving a neat sectional diagram.



7. Find the condition of minimum chromatic aberration for two lenses separated by a distance. Show that Huyghens' eyepiece is achromatic.

#### GROUP D

8. A battery of E. M. F. 2 volts is connected through a resistance of 10,000 ohms to a galvanometer of resistance 200 ohms and shunted by a resistance of 20 ohms. Calculate the current through the galvanometer.

9. What do you mean by transport numbers of ions?

Show how the ratio of the transport numbers of Cu and  $\text{SO}_4$  ions can be found by performing an electrolytic experiment.

10. What do you understand by radioactivity? Describe an arrangement for testing a substance for its radioactivity. What are  $\alpha$ ,  $\beta$ , and  $\gamma$  rays? Mention some of their properties.

### BOTANY

Examiners— } DR. SAHAYRAM BOSE, M.A., PH.D.  
MR. SALESWAR MOOKERJI, L.M.S.  
MR. K. P. BISWAS, M.Sc.  
DR. S. HEDAYETULLAH, M.A., PH.D.

*The figures in the margin indicate full marks.*

*Only ONE question is to be attempted from each part.*

#### FIRST PART

1. Describe with sketches the modes of reproduction in *Mucor*. 50
2. What do you understand by alternation of generations? Explain it in the life history of a Moss plant. 50

#### SECOND PART

1. Show in a labelled drawing the internal structure of a dorsiventral leaf. 50
2. Name the elements which constitute *Xylem* and *Phloem* tissues. Draw them, and state their functions. 50

#### THIRD PART

1. Describe briefly how the plant gets its nutrition. 50
2. What do you understand by transpiration? Explain briefly how it takes place in a green plant. 50

#### FOURTH PART

1. Write short notes on the following, and give examples with sketches:— 50
  - (a) A compound leaf, (b) A rhizome, (c) A syncarpous ovary, (d) Diadelphous stamens, (e) A corymb.
2. Give the general characters of the natural order *Convolvulaceae*. Give examples and floral diagrams. 50

## ZOOLOGY

DR. TARAKNATH PODDAR, M.Sc., Ph.D.

PROF. HIMADRIKUMAR MOOKERJI, D.Sc.(LOND.),

Examiners—

D.I.C.

MR. NIRIPENDRANATH MOOKERJI, M.B., F.Z.S.(LOND.)

DR. S. L. HORA, D.Sc.

*The questions are of equal value.**Two questions to be attempted from EACH part. Illustrate your answers with diagrams as far as possible.*

## FIRST PART

1. Draw a diagram of a typical animal cell, and label the parts.
2. Enumerate the principal structures which develop from the three germ-layers in a chick embryo.
3. Describe briefly what you know of the doctrine of Evolution.

## SECOND PART

1. Give the principal characters of Protozoa and its main subdivisions.
2. Describe the vascular system of the earthworm (*Pheretima*) in the anterior region.
3. Describe the development and functions of Coelome.

## THIRD PART

1. Give a general account of the excretory system of a freshwater prawn.
2. Sketch and label the mouth parts of a cockroach.
3. Describe the life history of the freshwater mussel (*Lamellidens*).

## FOURTH PART

1. Describe the mechanism of circulation of blood in the heart of a guinea pig.
2. Give the general characters of the Phylum Chordata.
3. Write short notes on *any five* of the following:—
  - (a) Elasmobranch, (b) Swim bladder, (c) Tadpole, (d) Tenth cranial nerve of a guinea pig, (e) Lower jaw of a guinea pig, (f) Loreal shield, (g) Pituitary body.

# First M. B. Examination

April, 1935

## ANATOMY

Examiners—  
RAI NANILAL PAN BAHADUR, M.B.  
MR. M. N. BOSE, M.B.  
„ PREMNIHAR RAY, M.B., F.R.C.S.(ENG.)  
„ BIRESWAR MITRA, F.R.C.S.(EDIN.)

### FIRST PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

1. Describe the fornix, noting its connections. 60
2. Describe the ovary and its development. 65

*Or,*

Describe the prostatic part of the urethra, and describe the development of the prostate gland.

#### SECOND HALF

1. Describe the palmar aponeurosis, and compare it with the plantar aponeurosis. 60
2. Describe the blood supply and lymphatic drainage of the tongue. 65

### SECOND PAPER

*The figures in the margin indicate full marks.*

#### FIRST HALF

1. Describe the nasal part of the Pharynx. 60
2. Describe the superficial origin, course, and distribution of the Accessory nerve. 65

#### SECOND HALF

1. Describe the ligaments of the Ankle joint. Note the relative position of the structures around the joint. 60
2. Describe the origin, course, and relations of the Internal Pudendal artery. Name its branches. 65

*Or,*

Describe the origin, course, and relations of the Internal Mammary artery. Name its branches.

## PHYSIOLOGY

## FIRST PAPER

PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
 CAPTAIN PREMANKUR DE, M.B., B.Sc., M.R.C.P.(EDIN.).  
 MR. PHANINDRANATH BRAHMACHARI, M.Sc., M.B.  
 DR. RUDENDRAKUMAR PAL, M.Sc., M.B., L.R.C.P.,  
 D.Sc. (EDIN).

*Examiners—*

MR. B. C. GHOSH, M.A., M.B., B.C.  
 MR. SUNILCHANDRA BASU, M.B., M.R.C.P., D.T.M.

*The questions are of equal value.*

*Only TWO questions are to be answered from each half.*

## FIRST HALF

1. Give an account of the Reticulo-Endothelial system.
2. Describe the physiology of the Coronary Circulation.
3. Describe briefly the process of production of amino-acids from proteins, and explain why some are most essential.

## SECOND HALF

1. Describe briefly the method of study of arterial blood pressure in man. Mention the factors affecting blood-pressure.
2. Describe the different mechanisms by which respiration is regulated to the needs of the body.
3. Give an account of the different hormones of the Pituitary gland and their functions.

## SECOND PAPER

*The questions are of equal value.*

*Only TWO questions are to be answered from each half.*

## FIRST HALF

1. Describe a hepatic lobule, and give an account of the intermediate metabolisms carried out therein.
2. What are Fats? How are they metabolized? Describe the influence of carbohydrates on fat metabolism.
3. Describe the connections of the cerebellum and its functions.

## SECOND HALF

1. How is posture maintained in man?
2. Describe the properties of plain muscle.
3. Describe the control of the eye-movements, and state the effects of injury to the third nerve.

**November, 1935**

## ANATOMY

*Examiners—* { RAI NANILAL PAN BAHADUR, M.B.  
 MR. M. N. BOSE, M.B., C.M. (EDIN.).  
 „ PREMNIHAR RAY, M.B., F.R.C.S. (ENG.).  
 „ BIRESWAR MITRA, F.R.C.S. (EDIN.).

## FIRST PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

1. Describe the Atrial Septum (Inter-auricular septum). Give an account of its development. 60
2. Describe the Uterine Tube. Describe its structure and development. 65

## SECOND HALF

1. What are the vocal folds (true vocal cords)? Enumerate the muscles which act on them, indicating their actions. 65
2. Describe the cutaneous distribution of the Radial Nerve. What muscles are supplied by it? 60

*Or,*

Describe the course, relations, and distribution of the deep Peroneal nerve

## SECOND PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

1. Enumerate the emissary veins, and mention their communications. 65
2. Describe the cruciate crural ligament. 60

## SECOND HALF

1. Describe the arterial and venous supply of the rectum and anal canal. 65

*Or,*

- Describe the arterial and venous supply of the stomach.
2. Describe the Parotid gland, noting its relations and the structures traversing it. 60

## PHYSIOLOGY

## FIRST PAPER

CAPTAIN PREMANKUR DE, M.B., B.Sc., M.R.C.P. (EDIN.).  
MR. PHANINDRANATH BRAHMACHARI, M.Sc., M.B.  
DR. RUDRENDRA KUMAR PAL, M.Sc., M.B., M.R.C.P.,  
D.Sc. (BERLIN).

*Examiners—*

MR. MADANMOHAN DATTA, L.M.S.  
„ B. C. GHOSH, M.A., M.B., B.C.  
DR. BIJALIBIHARI SARKAR, D.Sc.

*The questions are of equal value.*

*Answer only TWO questions in EACH half.*

## FIRST HALF

1. Discuss the influence of the various endocrine organs on carbohydrate metabolism.
2. Describe digestion in the small intestine.
3. Write what you know about the origin and functions of the white blood corpuscles.

## SECOND HALF

1. Give a detailed account of the chemical changes associated with muscular exercise.
2. Explain the role of the vagus and the sympathetic in cardiac activity. What do you mean by 'Humoral Theory' in connection therewith?
3. Explain, with a diagram, the afferent and efferent connections of the Basal Ganglia. Of what importance are these ganglia to the body?

## SECOND PAPER

*The questions are of equal value.*

*Answer only TWO questions in EACH half.*

## FIRST HALF

1. Describe briefly the effects of light on retina.
2. Give the minute structure and the functions of the renal tubule.
3. Describe the characters of a pulse and their respective significance.

## SECOND HALF

1. Describe the influence of changes in H-ion concentration in blood on respiration.
2. Describe the nervous control of salivary secretion.
3. Write short notes on :--
  - (a) Osmosis.
  - (b) Diphasic variation
  - (c) Colloidal state
  - (d) Ovulation.
  - (e) Opsonin.

## Second M. B. Examination

April, 1935

### PHARMACOLOGY AND MATERIA MEDICA

(INCLUDING PHARMACOLOGICAL CHEMISTRY AND PHARMACY)

Examiners— { Mr. JYOTIS CHANDRA GUPTA, M.B.  
                  { Mr. BIRENDRANATH GHOSH, F.R.F.P.&S.(GLAS.)  
                  { DR. HARIHAR GANGULI, M.D.  
                  { Mr. JATINDRA CHANDRA AICH, M.B., M.R.C.P.

*The questions are of equal value.*

*Only TWO questions in EACH half should be answered.*

#### FIRST HALF

1. What are hæmatinic drugs? Describe their mode of action in different forms of anæmia.
2. Write short notes on :—
  - (a) Action of thyroid on metabolism.
  - (b) Anthracene purgatives.
  - (c) Uses of CO<sub>2</sub> in therapeutics.
3. What are the different classes of drugs used for anæsthetic purposes? Discuss their relative values in producing anæsthesia.

#### SECOND HALF

4. Describe the pharmacological action of Emetine, and give in detail its toxic effects.
5. What is meant by *Salt Action* in pharmacology? Illustrate your answer with examples.
6. Write notes on :—
  - (a) Caffeine as a diuretic.
  - (b) Alcohol as food.
  - (c) Chologogues.

### ELEMENTARY BACTERIOLOGY AND PATHOLOGY

Examiners— { Mr. CHARUCHANDRA BOSE, B.A., M.B.  
                  { „ M. N. DE, M.B., F.R.C.P.  
                  { „ A. C. UKIL, M.B., M.S.P.E. (F.A.S.S.).  
                  { „ SATYENDRANATH RAY, M.B., F.R.C.S.

*The questions are of equal value.*

#### FIRST HALF

1. Name the common pathogenic protozoal parasites of man. Give the morphology and life-history of any one of them, and describe the pathological lesions caused by it.
2. What is a thrombus? Describe briefly the causes, mechanism, and sequelæ of thrombosis.

*Or,*

What is gangrene? Describe the pathology of gangrene.

## SECOND HALF

3. Describe briefly the changes that may be met with in blood in a generalized bacterial infection.

4. Describe the pathological lesions produced by *Diplococcus pneumoniae* (pneumococcus) in the lung. How would you isolate and identify the causative organism?

Or,

Write short notes on the following :—

- (a) *Wucheraria bancrofti*.
- (b) Filterable viruses.
- (c) Bacterial spores.
- (d) Pigmented tumours.
- (e) Acid-fast bacilli.

November, 1935

## PHARMACOLOGY AND MATERIA MEDICA

(INCLUDING PHARMACOLOGICAL CHEMISTRY AND PHARMACY)

Examiners— { LT.-COL. R. N. CHOPRA, M.A., M.D.(CANTAB), I.M.S.  
MR. BIRENDRANATH GHOSH, F.R.F.P.&S.(GLAS.)  
DR. HARIHAR GANGULI, M.D.  
MR. SUNIL CHANDRA BOSE, M.B., M.R.C.P.(LOND.),  
D.T.M.

*The questions are of equal value.*

## FIRST HALF

1. Give an account of the factors that modify the dosage of drugs. Discuss them with special reference to—

- (a) Quinine,
- (b) Digitalis,
- (c) Insulin,
- (d) Diphtheria Antitoxin.

2. What are Hormones? Describe the action and uses of the hormones of the supra-renal gland.

Or,

3. Define and classify Antipyretics. Describe the pharmacology and therapeutics of one that you consider the most important drug of this group.

## SECOND HALF

4. Discuss the relative merits and demerits of the various modes of administration of drugs.

5. Classify and discuss briefly the action of the drugs which alter the rate of the heart beat.

Or,

6. Describe the action of the following :—

- (a) Morphine on the alimentary canal.
- (b) Magnesium ion on the central nervous system.
- (c) Cocaine and atropine on the eye.



## ELEMENTARY BACTERIOLOGY AND PATHOLOGY

Examiners— { MR. CHARUCHANDRA BOSE, B.A., M.B.  
 { MR. M. N. DE, M.B., M.R.C.P.  
 { CAPTAIN C. L. FASRICHA, I.M.S.  
 { MR. SATYENDRANATH RAY, M.B., F.R.C.S.

*The questions are of equal value.*

*Illustrate your answer with diagrams.*

## FIRST HALF

1. What is a tumour? Describe the differences between a benign and a malignant tumour and the methods of spread of tumours, illustrating your answer with examples.

2. What are hookworms? Outline their morphology and mode of infection to man.

*Or,*

Describe the more important intestinal aræbæ. How would you differentiate them? How is infection conveyed to man?

## SECOND HALF

3. Describe in brief the methods used for the identification of bacteria.

4. Enumerate the types of gangrene. Describe in detail the conditions which give rise to moist gangrene.

*Or,*

Write short notes on the following :—

- (1) Antibody in its practical application.
  - (2) Passive hyperæmia.
  - (3) Methods of anærobic cultivation.
  - (4) Bacterial toxins.
-

# Third M. B. Examination

April, 1935

## FORENSIC MEDICINE

*Examiners—* { CAPTAIN HAZI DABIRUDDIN AHMED, L.M.S., V.H.S.,  
O.B.E., A.I.R.O.  
MR. A. N. SEN, M.B.  
RAI UPENDRANATH RAYCHAUDHURI BAHADUR, L.M.S.  
LT.-COL. R. N. CHOPRA, M.A., M.D. (CANTAB) I.M.S.

*The figures in the margin indicate full marks.*

### FIRST HALF

1. Describe the signs, symptoms, differential diagnosis, and treatment of Acute Arsenical Poisoning. What are the post-mortem appearances? 125
2. Enumerate the methods employed in Infanticide. How would you ascertain that a newly born infant was (a) born alive, and (b) fully mature? 125

*Or,*

How would you establish the identity of a living person?

### SECOND HALF

3. What are the post-mortem appearances of death by Drowning? How would you deal with an apparently drowned person? 125
4. What do you mean by 'Virgo Intacta'? What would you expect to find in a girl aged 14 years alleged to have been violated recently? 125

*Or,*

What are the points you should note in a case of injury brought to you by the Police for examination, and why?

## HYGIENE AND PUBLIC HEALTH

*Examiners—* { MR. R. B. KHAMBATA, D.P.H., M.R.C.P., M.R.C.S.  
MR. B. B. BRAHMACHARI, M.B., D.P.H.  
,, S. N. SEN, M.B., D.P.H., D.T.M.  
MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H., D.T.M.,  
F.C.S.

*The questions are of equal value.*

*Only two questions are to be answered in each half.*

*Questions 1 and 4 are compulsory.*

### FIRST HALF

1. What is meant by droplet infection? What diseases are spread in this manner? What methods of prevention have been found most effective? What floor space and cubic space should be provided in school-rooms and dormitories in the presence of an epidemic of disease spread by droplet infection?

2. Describe the process of Pasteurization of milk. What are the advantages and disadvantages of this method?

3. What are the distinguishing characters of *Anopheles*, *Culex*, and *Stegomyia* mosquitoes in their larval and adult stages? What are the favourite breeding places of these different species?

#### SECOND HALF

4. What is meant by a Malaria survey? What points are specially noted in such a survey? Write out a specimen Malaria survey of a small rural area in a malarious district of Bengal.

5. What are the duties of a Medical Practitioner in treating and attending a case of Typhoid fever in a private house?

6. What forms of latrines and urinals would you recommend for villages and for fairs or melas? Illustrate your answer by neat outline sketches.

**November, 1935**

### FORENSIC MEDICINE

CAPTAIN HAZI DABIRUDDIN AHMED, L.M.S., V.H.S.,  
O.B.E., A.I.R.O.

Examiners— { RAI UPENDRANATH RAYCHAUDHURI BAHADUR, L.M.S.  
LT.-COL. B. G. MALLAYA, F.R.C.S.E., I.M.S.  
RAI BAHADUR HEMCHANDRA SARKAR.

*The figures in the margin indicate full marks.*

#### FIRST HALF

1. Describe the signs, symptoms, and treatment of cobra poisoning. 125

*Or,*

Describe the signs, symptoms, treatment, and post-mortem appearances of poisoning by copper sulphate.

2. Contrast the post-mortem appearances of death by strangulation from that of hanging. 125

#### SECOND HALF

3. Define and give medico-legal significance of— 125

- (a) Post-mortem Hypostasis,
- (b) Viable age,
- (c) Cadaveric Spasm,
- (d) Dying Declaration,
- (e) Testamentary Capacity.

*Or,*

How will you distinguish between—

- (a) Ante-mortem and Post-mortem wounds;
- (b) Ante-mortem and Post-mortem burns?

4. How will you know if a person is feigning Insanity? 125

## HYGIENE AND PUBLIC HEALTH

MR. R. B. KHAMBATA, D.P.H., M.R.C.P., M.R.C.S.

LT.-COL. SIR HASSAN SUHRAWARDY, KT., O.B.E.,

M.D., F.R.C.S.I., D.P.H.

Examiners—

MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H., D.T.M.,  
F.C.S.

{ MR. B. B. BRAHMACHARI, M.B., D.P.H.

*The questions are of equal value.**Two questions are to be answered in EACH half. Questions 1 and 4 are compulsory.*

## FIRST HALF

1. What diseases can spread through drinking water? In a village what are the various sources from which you can provide yourself with water for domestic purposes? Discuss the suitability of each, and state the steps you would take so that the water from these sources may be made safe for drinking.

2. What is the composition of air? How is it vitiated by respiration? How is health affected by the air of an ill-ventilated overcrowded room? To what factors in such air are these effects due? What steps would you take to keep the air of a schoolroom wholesome?

3. What are Proximate principles of food? An adult ration contains 12 ounces of rice. How much fish, pulses, oils, and fat should it contain that it may be balanced? What other necessary adjuncts in the articles of food must be added so that the diet may maintain health and vitality.

## SECOND HALF

4. How would you disinfect—

(a) a room in a masonry building where a case of Bubonic Plague occurred;

(b) a room where a case of smallpox has occurred;

(c) a dwelling room where there was a boy suffering from Diphtheria? This room contains books, pictures, and articles of clothing.

5. How would you carry out a Malaria survey in a small town in Bengal?

6. What are the advantages and disadvantages of a trenching ground for the disposal of night-soil? You are to provide a trenching ground for a small town in Bengal with a population of 5,000. How would you lay it out and manage it so that it may be efficient and safe to Public Health?

# **Final M. B. Examination**

**April, 1935**

## **MEDICINE**

**Examiners—** CAPTAIN PRATULPATI GANGULI, B.A., D.T.M.  
DR. B. C. RAY, B.A., M.D., F.R.C.S., M.R.C.P.  
LT.-COL. E. H. VERE HODGE, I.M.S.  
MR. AKHILRANJAN MAJUMDAR, M.B.  
DR. INDUBHUSAN BOSE, M.D.  
DR. SIBAPADA BHATTACHARYYA, M.D.

### **FIRST PAPER**

*The questions are of equal value.*

#### **FIRST HALF**

1. Discuss the differential diagnosis of various inflammatory diseases of the fauces.
2. Describe the symptoms and pathology of Angina Pectoris.

#### **SECOND HALF**

3. What are the causes of Glycosuria? Discuss the differential diagnosis.

*Or,*

Describe the treatment of—

- (i) Pernicious malaria in a state of coma ;
- (ii) Haemorrhage in typhoid fever ;
- (iii) Renal colic ;
- (iv) Infantile convulsions.

### **SECOND PAPER**

*The questions are of equal value.*

#### **FIRST HALF**

1. You are called in to see a case of paroxysmal dyspnoea in an elderly person. Describe your methods of investigation for the diagnosis of the case.
2. Describe the symptoms, physical signs, and complications of Epidemic dropsy.

#### **SECOND HALF**

3. Describe the ætiology, symptoms, physical signs, and treatment of Rickets.

*Or,*

Give the symptoms, physical signs, and differential diagnosis of Amyotrophic Lateral Sclerosis.

## MIDWIFERY AND DISEASES OF WOMEN

SIR KEDARNATH DAS, Kt., C.I.E., M.D., F.C.O.G.  
 MR. NARENDRANATH BOSE, L.M.S.  
 „ SATINATH BAGCHI, M.Sc., M.B., M.O.  
*Examiners—* } LT.-COL. S. A. SWINEY, M.D., F.R.C.S.I., I.M.S.  
 DR. MANINDRANATH SARKAR, M.D., F.R.C.S.  
 MR. BAMANDAS MOOKERJEE, L.M.S.

## FIRST PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

1. What do you understand by Involution of the Puerperal Uterus? Describe the changes that occur in the organ. 60
2. Describe the clinical features of Acute Hydramnios, and discuss its differential diagnosis. 65

## SECOND HALF

3. How would you diagnose and treat a case of Acute Salpingitis? 65
4. Outline the principles of Artificial Feeding of an infant ten days old, where mother's milk is not available. 60

*Or,*

Describe the prophylactic and the curative treatment of Umbilical Sepsis in a new-born child.

## SECOND PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

1. Enumerate the varieties of Placenta Praevia. What is the basis of your classification? How do these varieties influence your line of treatment? 60
2. What are the signs by which you can say that a woman has given birth to a full-term child: (i) recently, (ii) several years previously? 65

## SECOND HALF

3. *Cervix Uteri*: (a) Describe its lymphatic drainage. (b) Mention its common pathological lesions. (c) What are the immediate and the late complications of an untreated cervical tear? 60
4. What complications may be met with in the Second Stage of Labour in a Breech Presentation? Describe the management of *any one* of such complications. 65

## SURGERY

Dr. LALITMOHAN BANERJEE, M.S., F.R.C.S.  
 Dr. S. K. MUKHERJEE, D.O. (OXON.), D.O.M.S. (LOND.),  
 F.R.C.S.  
*Examiners* Lt.-Col. E. W. O' G. KIRWAN, M.B., F.R.C.S., I.M.S.  
 Lt.-Col. F. J. ANDERSON, I.M.S.  
 CAPTAIN DINESCHANDRA CHAKRABARTI, F.R.C.S. (E.).  
 Lt.-Col. K. K. CHATTERJEE, F.R.C.S.I.

## FIRST PAPER

*The questions are of equal value.*

*Either Question 4 or 5 to be attempted.*

## FIRST HALF

1. What is a whitlow? Describe its different varieties. What complications may arise from a whitlow of the thumb? Give its treatment.
2. Give the complications that may arise after an operation for removal of the vermiform appendix (process) (a) in the acute stage, (b) in the quiescent stage.

## SECOND HALF

3. What are the conditions which give rise to increased intracranial pressure? How would you proceed to investigate a case to arrive at a diagnosis?
4. What is congenital Talipes Equinovarus? Describe the anatomical changes that occur in such a condition. Give your treatment briefly.

*Or,*

5. What are the varieties of hydronephrosis? Discuss its pathology.

## SECOND PAPER

*The questions are of equal value.*

*Either Question 4 or 5 is to be attempted.*

## FIRST HALF

1. How is normal intra-ocular tension maintained? Discuss the effects of increased intra-ocular pressure over the different structures of the eye-ball.
2. What signs and symptoms will make you suspect suppuration in the maxillary antrum (air sinus)? What complications may result from this condition? How would you treat a case of suppuration in the maxillary sinus (antrum)?

## SECOND HALF

3. Discuss a case of a swelling in the right hypochondrium associated with jaundice.
  4. Describe the varieties of stricture of the male urethra. Give in detail the treatment of each variety.
- Or,*
5. What fractures may occur in the neighbourhood of the shoulder joint? Give briefly the treatment you would adopt for each.

November, 1935

## MEDICINE

Examiners— { SIR UPENDRANATH BRAHMACHARI, KT., M.A., M.D.,  
 PH.D., F.A.S.E.  
 DR. B. C. RAY, B.A., M.D., F.R.C.S., M.R.C.P.  
 LT.-COL. E. H. VERE HODGE, I.M.S.  
 MR. AKHILRANJAN MAJUMDAR, M.B.  
 DR. INDUBHUSHAN BOSE, M.D.  
 .. SIRAPADA BHATTACHARJEE, M.D.

## FIRST PAPER

*The questions are of equal value.*

## FIRST HALF

1. Describe the pathology, signs, and symptoms of Cardio-vascular Syphilis.

2. A young man aged 25 is suffering from Tremors of the Upper Extremities. Give the differential diagnosis.

## SECOND HALF

3. What do you mean by 'Carriers' in infectious diseases? Enumerate the diseases which are propagated by them. What treatment would you adopt to render a carrier of any two diseases on your list non-infective?

*Or,*

4. Give the treatment of—

- (a) Acute Bacillary Dysentery.
- (b) Cerebro-spinal Meningitis.

## SECOND PAPER

*The questions are of equal value.*

## FIRST HALF

1. Give a clinical account of Whooping Cough in a child. Give its differential diagnosis, complications, and treatment.

2. What are the causes of Dysphagia? Discuss the differential diagnosis.

## SECOND HALF

3. Describe the etiology, signs, symptoms, diagnosis, and treatment of Ex-ophthalmic Goitre.

*Or,*

4. Give the clinical types of Uræmia and its treatment.



## MIDWIFERY AND DISEASES OF WOMEN

## FIRST PAPER

Examiners--	I.E.-COL. P. F. Gow, F.R.C.S.I., M.C.O.G, I.M.S
	MR. NARENDRANATH BOSE, L.M.S.
	„ SATINATH BAGCHI, M.Sc., M.B., M.O.
	DR. MANINDRANATH SARKAR, M.D., F.R.C.S.
	MR. BAMANDAS MUKHERJEE, L.M.S.
	DR. SUBODHCHANDRA MITRA, M.D.(BER.), M.B.(CAL.), F.R.C.S.(EDIN.), M.C.O.G.

*The figures in the margin indicate full marks.*

## FIRST HALF

1. Give an account of the distribution of the cellular tissue in the female pelvis, and trace its continuity with similar tissue-planes in other parts of the body. 65
2. Discuss the indications and contra-indications for the use of the Posterior Pituitary Extract during labour. 60

## SECOND HALF

3. State *clearly* under what circumstances you would apply forceps to assist delivery in a case of vertex presentation. 65
4. Discuss the *prophylactic* treatment of (i) Ophthalmia neonatorum, (ii) Tetanus neonatorum. 60

*Or,*

What are the causes of Jaundice in an infant six days old? State briefly how you would deal with it.

## SECOND PAPER

*The figures in the margin indicate full marks.*

## FIRST HALF

1. Describe the signs of pregnancy that you would expect to find in a woman who is pregnant three months. What hygienic instructions would you give her? 65
2. Describe how you would treat hæmorrhage occurring after the birth of the baby and before the delivery of the placenta. 60

## SECOND HALF

3. How would you look after a patient during the first week after abdominal section for a gynæcological condition? Give details. 65
4. A woman aged 45 years complains of excessive loss of blood at the menstrual periods for the last six months. How would you investigate the case? 60

## SURGERY

Examiners— {  
 MR. LALITMOHAN BANERJEE, M.S., F.R.C.S.  
 DR. S. K. MUKHERJI, D.O. (OXON.), D.O.M.S.(LOND.),  
 F.R.C.S.  
 CAPTAIN DINESCHANDRA CHAKRABARTI, F.R.C.S.(E)  
 LT.-COL. K. K. CHATTERJEE, F.R.C.S.I.  
 LT.-COL. P. BANERJEE, I.M.S., F.R.F.P.S.  
 MR. U. N. DAS, B.A., M.B., F.R.C.S.(EDIN.)

## FIRST PAPER

*The questions are of equal value.*

*Either Question 4 or Question 5 to be attempted.*

## FIRST HALF

1. What are the different varieties of Hydronephrosis? Discuss their causes, and mention briefly the treatment in each case.
2. Give the differential diagnosis of swellings in the breast.

## SECOND HALF

3. Describe fully how you would proceed to examine and diagnose a case of an ulcer in the genitals of venereal origin.
4. Discuss briefly the treatment of peptic ulcer.

*Or,*

5. Enumerate the various complications that may arise in a case of long-standing inguinal hernia, and give their differential diagnosis.

## SECOND PAPER

*All questions are of equal value.*

1. How would you decide when a senile cataract is ready for operation? Mention the chief risks of the operation, and explain the terms 'Secondary Cataract' and 'Complicated Cataract'.

2. How would you treat a case of Supracondylar fracture of the humerus of recent origin, and what complications may follow such a fracture?

3. Give the signs, symptoms, and differential diagnosis of carcinoma of the rectum.

4. What is pyæmia? Describe a typical case, and mention briefly how you would treat it.

*Or,*

5. What is a naso-pharyngeal (antro-choanal) polypus? Discuss briefly its ætiology, and mention its signs and symptoms.

# I. E. Examination

1935

## COMPUTATION, MENSURATION, AND STATICS

Examiners— { DR. S. R. SENGUPTA, PH.D.  
PROF. NIKHILRANJAN SEN, D.Sc., PH.D.

The questions are of equal value in EACH half.

### FIRST HALF

Only FOUR questions to be attempted from this half.

1. (a) Evaluate the following correct to three decimal places:—

$$\frac{0.0039178 \times e^{1.752} + 4.069 \times e^{-0.023}}{2.753^{4.78} \times 0.00897^{-3} \times \pi^3} + \log_e 172 \times \frac{0.931}{7.85}$$

- (b) Solve the equation for  $x$

$$(x-1) = 2.3517.$$

2. (a) Find the area in square feet of a regular pentagon of sides 11 yd. 1 ft. 11 in. each.

(b) On a hill sloping at  $18^\circ$  to the horizontal plane, runs a track making an angle of  $50^\circ$  with the line of the greatest slope. What is the length of the track to the top of the hill which is 1,500 ft. high, and what angle does the track make with the horizontal plane?

3. (a) State Simpson's Rule, and explain how to apply it to find an area.

(b) The following table shows the depth of a river bed from the mean water-level at various distances from the left bank. The table also gives the measured mean velocities for these positions. Find the discharge in cubic feet per second:—

Distance in ft. ...	0	10	20	30	40	50	60	70	80	90	100
Depth in ft. ...	0	5	7	11	21	29	38	15	13	7	0
Velocity in ft./sec.	0	1.5	1.8	2.0	2.3	2.5	2.2	2.2	2.1	2.1	0

4. A life buoy can be regarded as hollow cylindrical ring of inner and outer diameters of 1 ft. 11 in. and 3 ft. 6 in. respectively. The thickness of the shell is .02 inch and it is made of material weighing 0.20 lb. per cubic inch. Find the weight of the buoy, and compare it with the weight of the same volume of sea water. Weight of sea water is 64 lb. per cubic foot.

5. A railway line runs through a raised part of the country and at right angles to it. The transverse slope of the hill is 1 in 10 and the gradient of the formation level is 1 in 50. The side slope of the cutting is  $1\frac{1}{2} : 1$ , and the width of the formation level is 32 ft. Find the volume of the earthwork to be excavated over a length of 117 feet.

## SECOND HALF

Only THREE questions to be attempted from this half.

1. Enunciate and prove what is known as 'the Polygon of Forces'.

Forces  $OA=30$  lb.,  $OB=50$  lb.,  $CO=15$  lb.,  $DO=10$  lb.,  $OE=150$  lb. meet at a point: the angles are  $BOA=45^\circ$ ,  $COA=90^\circ$ ,  $DOA=135^\circ$ ,  $EOA=270^\circ$ . Find the force which will equilibrate this system.

2. How would you reduce a system of coplanar forces into a single force and a couple? Deduce therefrom the conditions of equilibrium of the system.

A beam 20 ft. long supported at its ends has a load of 2 tons at the centre of the span, another of 1½ tons at 3 ft. from one end, and another of 3¼ tons at 4 ft. 6 inches from the other end. Find the reactions of the supports neglecting the weight of the beam.

3. Define *mechanical advantage* and *efficiency* of a machine. Find the mechanical advantage of a screw.

A man weighing 10 stones supports a weight of 91 lb. by means of 3 moveable pulleys arranged in the first system and weighing respectively 2 lb., 4 lb., 5 lb. from top. What is the thrust of the man on the ground?

4. Discuss the condition of stability of equilibrium of a body resting on a horizontal plane.

A circular disc 6 feet in diameter has a circular hole 6 inches in diameter cut out from it, the centre of the hole being 2 feet from one edge of the disc. How far will the centre of gravity be from the nearest edge?

5. A uniform ladder 70 ft. long is equally inclined to a vertical wall and horizontal ground, both of which are rough. The weight of a man and his burden ascending the ladder is 2 cwt. and the weight of the ladder is 4 cwt. How far up may he ascend before the ladder begins to slip if  $\mu = \frac{1}{3}$  for the ground and  $\frac{1}{4}$  for the wall?

## CALCULUS AND PLANE GEOMETRY

Examiners -  $\left\{ \begin{array}{l} \text{DR. S. R. SENGUPTA, PH.D.} \\ \text{PROF. NIKHILRANJAN SEN, D.Sc., PH.D.} \end{array} \right.$

The questions are of equal value.

Only THREE questions to be attempted from EACH half.

## FIRST HALF

1. (a) Give an analytical definition of the derivative of a function of  $x$  with respect to  $x$ .

- (b) Prove that if  $u$  and  $v$  are both functions of  $x$  then

$$D_x \left( \frac{u}{v} \right) = \frac{v D_x u - u D_x v}{v^2}.$$

When does the above fail?

- (c) Find the first derivative of  $\sin x$  from first principles.

- (d) Differentiate with respect to the independent variable

$$\log_{10} x^a,$$

$$(ii) \log \frac{b + a \cos t + \sqrt{b^2 - a^2} \sin t}{a + b \cos t}.$$

## 2. (a) Trace the curve

$$y = x^3 - 9x^2 + 24x - 7$$

and mark the maximum and minimum turning values, and the points of inflection. Also find the equations of the tangent and normal at each point of inflection.

(b) Find the most advantageous length for a lever by means of which you wish to raise a weight of 200 lb., if the distance of the weight from the fulcrum is 3 ft.; the fulcrum is at one end. The lever weighs 4 lb. per foot.

3. (a) Prove that the radius of curvature at any point of a curve is given by the value of

$$\pm \left\{ 1 + \left( \frac{dy}{dx} \right)^2 \right\}^{\frac{3}{2}} \div \frac{d^2y}{dx^2}$$

at that point.

Find the radius of curvature of the curve

$$x^{\frac{1}{2}} + y^{\frac{1}{2}} = 5$$

at the point (3, 4).

(b) If  $x$  and  $y$  are functions of  $\theta$  prove that

$$\frac{d^2y}{dx^2} = \frac{\frac{dy}{d\theta}}{\frac{dx}{d\theta}} \cdot \frac{\frac{d^2y}{d\theta^2}}{\frac{d^2x}{d\theta^2}} = \frac{\frac{dy}{d\theta}}{\left( \frac{dx}{d\theta} \right)^2} \cdot \frac{d^2y}{d\theta^2}$$

and find the value of  $\frac{d^2y}{dx^2}$  if  $x = a \cos \theta$ ,  $y = a \sin \theta$ .

4. (a) Give a geometrical interpretation of

$$\int_a^b F(x) dx.$$

(b) Integrate the following with respect to  $x$  :—

(i)  $\cos x \cdot \cos 2x \cos 3x$  ;

(ii)  $\frac{x+1}{x^2+x+1}$ .

5. (a) Find the area between the  $x$ -axis and one arch of the harmonic curve

$$= b \sin \left( \frac{x}{a} \right).$$

(b) Find by integration the volume of a cone whose height is  $h$  and whose base diameter is  $2r$ .

(c) If the error in measuring the diameter is 0.003 inch, find the error introduced in the calculated volume when  $h=3$  inches and  $r=2$  inches.

What will be the percentage error in the volume if the height is measured wrongly by the same amount but the diameter be correctly measured?

## SECOND HALF

1. Find the co-ordinates of the point which divides the join of two points  $(x_1, y_1)$  and  $(x_2, y_2)$  in the ratio  $m_1 : m_2$ .

Prove that the lines joining the middle points of opposite sides of a quadrilateral and the lines joining the middle points of its diagonals meet in a point and bisect one another.

2. Find the angle between the straight lines

$$y = m_1x + c_1, \quad y = m_2x + c_2.$$

Obtain the equation to the straight line passing through the intersection of the lines

$$2x - 3y - 5 = 0, \quad x + y = 1$$

and parallel to the line  $3x + 2y = 1$ . What is the distance of the straight line thus obtained from the origin?

3. Given the vertical angle of a triangle and the sum of the reciprocals of the sides containing the angle, show that the base always passes through a fixed point.

4. Find the condition that

$$ax^2 + by^2 + 2hxy + 2gx + 2fy + c = 0$$

may represent a circle.

Prove that the straight line

$$y = mx + a\sqrt{1 + m^2}$$

will for all real values of  $m$  touch a circle,  $a$  being fixed.

Find for what value of  $k$  the straight line

$$3x + 4y + k = 0$$

will touch the circle

$$x^2 + y^2 - 2x = 0.$$

5. Find the equation to the parabola with  $(a, b)$  as focus and

$$\frac{x}{a} + \frac{y}{b} = 1$$

as directrix. Find the equation to the latus rectum and its length.

## GENERAL CHEMISTRY

Examiners—  $\left\{ \begin{array}{l} \text{MR. N. N. SEN} \\ \text{,, B. N. MAITRA, M.Sc.} \end{array} \right.$

*The questions are of equal value.*

*Only THREE question to be attempted from EACH half.*

### FIRST HALF

1. Write notes on (1) constant boiling mixtures, and (2) Van der Waal's constants 'a' and 'b'.

2. Explain why equimolecular solutions of electrolytes and non-electrolytes differ in respect of osmotic pressure exerted at the same temperature. Show how you can calculate the degree of dissociation of an electrolyte from the measurement of its osmotic pressure.

Assuming 90% dissociation, calculate the osmotic pressure of a 2% solution of sodium chloride at 30°C.

$$[\text{Na} = 23; \text{Cl} = 35.5.]$$

3. Describe the commercial method of preparing the following: Lithopone; Prussian Blue; Borax; Carborundum; Plaster of Paris; Ammonia. State their industrial uses.

4. Give the chemistry of the operations involved in the separation of III Group metals in presence of Phosphoric acid. How would you detect the presence of (a) barium sulphate in white lead, (b) red lead in vermilion, and (c) yellow ochre in chrome yellow?

## SECOND HALF

5. Describe the manufacture of Sulphuric acid by the Chamber Process. Give equations. What impurities are usually present in commercial acid and how are they removed?

6. What are the important methods for the commercial production of Oxygen and Hydrogen Peroxide? State their industrial uses.

Give equations showing the reactions when Sulphuric acid is heated with (1) Manganese Dioxide, (2) Potassium Bichromate, (3) Potassium Permanganate.

7. Starting with 'Bone Ash,' how would you prepare (1) Orthophosphoric acid, (2) Sodium phosphate, (3) Tricalcium orthophosphate? Give equations.

What are the commercial uses of Phosphorous?

8. Name the principal ores of Zinc.

Describe briefly the Belgian process of the manufacture of the metal.

Write a note on the technical uses of Zinc and its compounds.

## PHYSICS

Examiners— } Mr. A. C. CHAKRABARTI  
                  ,, P. C. MAHALANOBIS, M.A. (CANTAB)

*The questions are of equal value.*

*Only THREE questions to be attempted from EACH half.*

## FIRST HALF

1. Define magnetic flux and magnetomotive force. With the help of the hysteresis diagram, explain the difference in the magnetic properties of soft iron and steel. Which of these substances gives greater maximum permeability?

2. Explain the construction and the working of a sine galvanometer. Why is it more accurate than a tangent galvanometer? Can it be used for measuring very strong currents?

3. A battery of e.m.f.=110 volts and internal resistance=10 ohms supplies current to a house. In the house there are two electric heaters each of 10 ohms resistance. Will the heat given out by the heaters be greater when they are worked in series than when they are worked in parallel?

4. Explain, with full theory, the 'air-film' method of measuring the refractive index of a liquid.

5. What are 'aplanatic foci'? Explain one case of aplanatic foci obtained by reflection and one case obtained by refraction.

## SECOND HALF

6. Define dispersion and dispersive power. Explain fully how a combination of a concave and a convex lens may be made achromatic.

7. Describe, explaining the theory and corrections, Regnault's method of measuring the coefficient of expansion of a gas at constant pressure.

8. Obtain the relation  $pV = RT$  for an ideal gas.

The universal gas constant  $R = 8.3 \times 10^7$  in C.G.S. units. One kilogramme of carbon-dioxide is compressed into a cylinder of 30 litres capacity. What will be the pressure of the gas at  $30^\circ\text{C}$ ?

9. Explain Ramsay and Young's method of measuring vapour pressure.

10. Write a short essay on one of the following subjects:—

(a) Influence of pressure on melting point.

(b) Dulong and Petit's law of Atomic Heat.

(c) Types of primary and secondary cells in common use.

## CALCULUS AND PLANE GEOMETRY

Examiners— } DR. S. R. SENGUPTA, PH.D.  
MR. N. C. GHOSH, M.A.

*The questions are of equal value.*

*All diagrams to be neatly drawn.*

*Not more than THREE questions to be attempted from EACH half.*

## FIRST HALF

1. (a) State and prove Leibnitz's theorem.

(b) If  $f(x) = (x-a)^r \phi(x)$  where  $r$  is a positive integer and  $\phi(x)$  is a rational integral function that does not vanish when  $x=a$ , show that

$$f(a)=0, f'(a)=0, f^{(r)}(a)=r! \phi(a).$$

(c) If  $y = e^{ax} \sin(4x+2)$   
prove that

$$\frac{d^n y}{dx^n} = 5^n e^{ax} \sin\left(4x+2+n \tan^{-1} \frac{4}{3}\right).$$

2. (a) If  $u=f(x, y)$ , give analytical definitions of

$$\frac{\partial u}{\partial x}, \frac{\partial u}{\partial y}.$$

(b) Prove that

$$\frac{du}{dx} = \frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} \cdot \frac{dy}{dx}.$$

(c) If  $u=f(x, y)$  and  $x$  and  $y$  are functions of  $t$  find  $\frac{d^2 u}{dt^2}$ .

(d) If  $u=f(x, y)$  and  $x=r \cos \phi$ ,  $y=r \sin \phi$ , show that

$$\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = \frac{\partial^2 u}{\partial r^2} + \frac{1}{r} \frac{\partial u}{\partial r} + \frac{1}{r^2} \frac{\partial^2 u}{\partial \phi^2}.$$

3. (a) State and prove Taylor's theorem for functions of one variable and show that Maclaurin's series is a special case of Taylor's series.

(b) Obtain a development for  $y = \sqrt{1-x^2}$ .

(c) Find a series for  $\sin^{-1}x$  and find the angle in degrees whose sine is 0.8.

4. (a) The transition curve on a railway track has the shape of an arc of a cubic parabola  $y=x^3$ . At what rate is a car on this track changing its direction when it is passing through the points (0, 0) and (2, 8)? The unit of length is 1 mile. Find the equations of the tangent and normal at these points. Find the radii of curvature and the co-ordinates of the centres of circles of curvature at these points.

(b) A side  $c$  of a triangle is determined in terms of the other two sides and the included angle by means of the formula

$$c^2 = a^2 + b^2 - 2ab \cos C.$$

Find the percentage error in  $c$  due to errors of 2 per cent. in the measurements of  $a$  and  $b$  and of 5% in that of angle  $C$ , when  $a=17'$ ,  $b=24'$ , and  $C=60^\circ$ .



5. (a) Evaluate the following integrals:—

$$(i) \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \frac{d\phi}{12 + 13 \cos \phi} ; \quad (ii) \int_0^a \frac{x \sqrt{a^2 - x^2}}{\sqrt{a^2 + x^2}} dx ;$$

$$iii) \int_0^{\frac{\pi}{6}} \sec^3 x dx.$$

(b) What is the geometrical significance of the constant of integration? Explain it by evaluating

$$\int 2x dx.$$

6. (a) Find the area bounded by the two parabolas

$$y^2 = 3x \text{ and } x^2 = 3y.$$

(b) Find the average value of the power in watts if the E.M.F. in volts and the current in amperes are given by  $V = 110 \sin at$  and  $C = 95 \sin (at - \theta)$  respectively and  $\theta$  is the lag. For what value of the lag is the average power zero?

(c) Find the length of one arch of the cycloid given by

$$\begin{aligned} x &= r(\theta - \sin \theta) \\ y &= r(1 - \cos \theta). \end{aligned}$$

## SECOND HALF

1. A parallelogram has its two pairs of opposite sides given by the equations,

$$x^2 + 6x - 40 = 0,$$

and

$$(2y - x)^2 - 4(2y - x) - 12 = 0.$$

Find the vertices, and the equations of the diagonals.

2. Find the centre and the radius of the circle,

$$x^2 + y^2 - 6x - 8y = 0.$$

Find also the equations of the straight lines joining the origin to the points in which the circle is cut by the line  $y = mx + c$ ; and deduce the condition that the line ( $y = mx + c$ ) may be a tangent to the circle.

3. Find the equations of the tangent and the normal to the parabola,  $y^2 = 4ax$ , at the point  $(at^2, 2at)$ .

If the normal at the point  $(at_1^2, 2at_1)$  meets the parabola again in the point  $(at_2^2, 2at_2)$ , prove that

$$t_2 = -t_1 - \frac{2}{t_1}.$$

4. Show that the lines,  $y + 3x = 0$ , and  $4y - x = 0$ , are conjugate diameters of the ellipse,

$$3x^2 + 4y^2 = 5,$$

Find also the equations of the equiconjugate diameters and their length.

5. Trace the conic whose equation is

$$2x^2 + 8xy - 2y^2 - 7x + y = 2,$$

showing carefully the positions of the centre and the axes.

## HYDROSTATICS, DYNAMICS AND APPLIED MECHANICS

Examiners— { DR. S. R. SENGUPTA, PH.D.  
MR. KHAGENDRANATH CHAKRABARTI

*The questions are of equal value.*

*Not more than THREE questions to be attempted from EACH half.*

### FIRST HALF

1. Find the pressure at any point of a heavy homogeneous liquid at rest.

A hollow cone, whose axis is vertical and base downwards, is filled with equal volumes of two liquids, whose densities are in the ratio 3 : 1 ; prove that the pressure at a point in the base is  $(3 - \frac{3}{4})$  times as great as when the vessel is filled with the lighter liquid.

2. If a plane surface is immersed in a homogeneous liquid under gravity, prove that the whole pressure on it is equal to the area of the surface multiplied by the pressure at its centre of gravity.

The sides of a cistern are vertical. Its base is a horizontal regular hexagon each side of which is  $\sqrt{3}$  feet long. Find its depth if, when it is full of water, the thrust on each of its sides is the same as on its base.

3. Obtain the conditions of equilibrium of a heavy body floating freely in a liquid.

A ship sailing from the sea into a rivier sinks  $a$  inches and on discharging  $x$  tons of her cargo rises  $b$  inches ; if sea-water be one fortieth heavier than river-water, prove that the mass of the ship is  $41 \frac{a}{b} x$  tons.

4. Explain fully the formula  $P = mf$ .

While a train is getting up speed, a box hanging from the roof of the guard's van is noticed to hang  $12^\circ$  from the vertical. Find how long it will take the train to acquire a velocity of 30 miles per hour.  $\tan 12^\circ = \frac{1}{2}$

5. State the principle of Conservation of Energy.

If the weight taken by the driving wheels of an engine is 12.5 tons and the coefficient of friction is .2, find the greatest speed a train of 100 tons can acquire in travelling 1 mile from rest to rest again against a constant resistance of 11.2 lb. per ton, and an additional frictional force of 20 tons weight when the brakes are on.

### SECOND HALF

1. (a) Draw a typical stress-strain curve (in tension) for an ordinary mild steel specimen, and mark on this diagram the points indicating Limit of Proportionality, Yield, Maximum stress, and Breaking stress.

(b) What is meant by the term Factor of Safety, and what is the object of using it?

(c) Find the working stress in tension using a factor of safety of 4 on a maximum stress of 28 tons per sq. inch.

(d) A rod of circular but non-uniform section hangs from the ceiling and it carries a platform weighing 700 lb. at its free end. The upper half of the rod is 6 ft. in length and  $1\frac{1}{4}$  inch in diameter. The remaining 6 ft. is  $1\frac{1}{4}$  inch in diameter. Weight of the material is 0.28 lb. per cubic inch, and Young's modulus is 18,000 tons per sq. in. Find the maximum and minimum stresses in the rod and the total extension. By how much will these figures change when a weight of 10 tons is placed on the platform?

2. Design a mild steel lever of uniform rectangular section, 10 ft. in length, to raise a load of 20 tons, on a working stress of 8 tons per sq. in. The fulcrum is 2 ft. away from one end, and the breadth of the section is to be a quarter of the depth.

3. Draw the bending moment and shear force diagrams for a freely supported beam 24 ft. in length, carrying a uniformly distributed load of 1 ton per foot run in addition to two concentrated loads of 5 and 7 tons at quarter points from the ends.

4. A chimney stack 80 ft. high can be regarded as a hollow cylinder of inside and outside radii of 4 ft. and 6 ft. respectively. It projects from a solid base of 14 ft. square and 4 ft. deep. A transverse wind load of 4,000 lb. is assumed to act on the chimney at a height of 19 ft. from the lowest level of the base. Find the maximum and minimum pressures at the base and test the stability against overturning. Weight of material is to be taken as 150 lb. per cubic foot.

5. Find the cross section of a freely supported timber beam of rectangular section, 16 ft. in length, to carry a central load of 7 tons if the deflection is not to exceed  $\frac{1}{500}$  of the span, using a working stress of 1 ton per sq. in. Young's Modulus for timber is  $2.4 \times 10^6$  lb. per sq. in.

## APPLIED PHYSICS

Examiners— { MR. A. C. CHAKRABARTI  
PROF. P. N. GHOSH, M.A., PH.D., SC.D.

*The questions are of equal value.*

*Only THREE questions to be attempted from EACH half.*

### FIRST HALF

1. Describe and explain the theory of Lee's Disc method of measuring the thermal conductivity of a solid.

2. The thermal conductivity of felt is '000087 C.G.S. units. Find the quantity of heat transmitted in one hour through a layer of felt one cm. thick covering a cylindrical hot case 50 cm. and 80 cm. in diameter when the temperature difference between the inside and the outside is  $20^{\circ}\text{C}$ .

3. What considerations about the natures of molecules led to the modification of Boyle's Law into Van der Waal's Equation? How are 'a' and 'b' in Van der Waal's Equation related to the critical constants of a substance?

4. What is Kelvin's scale of temperature? Explain why it is called the absolute scale. Briefly indicate how the Hydrogen Thermometer has been corrected so as to give measurements on Kelvin's scale.

5. Define 'Entropy'. What does the area of a loop on the  $\theta-\phi$  diagram represent?

Prove that the rate of decrease of temperature with increase of volume during any adiabatic expansion of a substance is equal to its rate of increase of pressure with increase of entropy when it is heated at constant volume.

### SECOND HALF

6. Describe and explain the working of a Quadrant Electrometer.

7. Discuss the method you would adopt for comparing the capacities of two condensers electrostatically.

Calculate the diameter of a copper rod which when placed co-axially inside a copper tube of 10 cm. length and 5 cm. internal diameter will form a condenser of capacity equal to 500 E.S. units.

8. Describe and explain the working of Weber's Electrodynamometer.

9. State Lenz's Law of Electromagnetic Induction.

A train runs at the rate of 40 kilometres/hour on a metre-gauge railway. The lines are of negligible resistance but they are connected through a milliammeter of resistance  $\cdot 1$  ohm. What will be the current indicated when the earth's vertical field =  $\cdot 17$  Gauss?

10. You have got an ordinary portable ammeter with a range of 0–10 amps. and small internal resistance. You have no other electrical measuring instrument but you know the value of  $H$  at the station. Describe fully how you will proceed to calibrate the ammeter.

## MECHANICAL ENGINEERING

Examiners-- { MR. A. M. AHMED, B.Sc.  
 " E. I. HOGGEN  
 " B. N. BANERJEE

*The questions are of equal value.*

### FIRST HALF

*Answer Question 1 and ANY TWO others from this half.*

1. Describe the Otto cycle. Deduce an expression for the efficiency of an ideal engine running on the Otto cycle.

What do you understand by the term Air Standard Cycle Efficiency? The following data were obtained from a gas engine trial: I.H.P. = 82; gas supplied per I.H.P. per hour at N.T.P. = 38.45 cubic foot; calorific value of gas = 181 B.Th.U. per cubic foot. Compression ratio = 6. Find (i) the air standard efficiency, (ii) the actual thermal efficiency, and (iii) the efficiency ratio of the engine.

2. What do you understand by the term Slip Air as applied to carburettors? Explain, with neat sketches, how the effect of the level of petrol being below the jet in a simple Jet in Tube carburettor is compensated for in the Zenith carburettor.

Find the change in the slip air of a simple Jet in Tube Carburettor when the fuel is changed from one of density 0.72 to one of 0.82. Neglect the effect of surface tension.

3. Show that when a belt is transmitting the maximum power, the centrifugal stress is one third of the greatest stress.

A counter shaft which runs at 300 R.P.M. is required to transmit 10 H.P. to a machine shaft running at 900 R.P.M. and carrying a pulley of 12 inches diameter. Assuming the tension on the tight side to be twice that on the slack side, find the width of belt required, taking account of the centrifugal tension. The thickness of belt is  $\frac{1}{4}$  inch and the weight of a cubic inch of belt may be taken as 0.035 lb. Take the safe stress of belt equal to 350 lbs./sq. in.

4. Define Instantaneous Centre and Centroides, giving illustrations.

A Steam Engine has a stroke of 14 inches and connecting rod 4 feet long. Plot the velocity curve of the crosshead for one complete turn when the engine is running at 146 R.P.M.



## ELECTRICAL ENGINEERING

Examiners— { A. K. DAS.  
MR. M. SENGUPTA.  
S. W. REDELEJT.

*The questions are of equal value.*

*Only THREE questions to be attempted from EACH half.*

## FIRST HALF

1. What must be the horse-power of an engine to drive by means of a belt, a generator supply 7,000 lamps each taking 0.5 ampere at 250 volts? The line drop is 5 volt and the efficiency of the generator is 95%. There is 25% loss in the belt-drive.

2. Compare the characteristics of a shunt motor with that of a series motor, and hence discuss the suitability of each type of motor for different purposes. Draw a sketch of a shunt motor starter with no-volt and over-load releases.

3. Define power-factor, apparent power, root-mean-square value, and average value as applied to an alternating current circuit. Find the r.m.s. and average value of the current  $I = 20 \sin \omega t$ . Prove any formula used.

4. Three similar coils, each having a resistance of 20 ohms and a self-inductance of 0.07 henry, are connected in parallel across a 500 volt 50 cycle alternating current mains. Calculate the total current from the mains-power absorbed in the coils and the power-factor of the circuit. What would be the value of a resistanceless shunting condenser to bring the power-factor to unity?

## SECOND HALF

1. What do you understand by the term 'reaction' when applied to a D.C. armature? Make a sketch to explain your answer. What effect does reaction have on commutation in a D.C. machine, and how is this overcome?

2. What is the meaning of 'Back E.M.F.'? Make a diagram of connections of a series wound 2 pole motor with a controller to give 2 speeds.

Why does the speed vary in the 2 cases? Comment fully on the changed conditions in the armature current, etc.

3. An arc lamp in a cinema machine requires, say, 60 or 70 volts across the arc but 230 volts is available from the town supply. Make a diagram of connections, and explain the working of a motor generator or autoconverter set suitable for the arc lamp, bearing in mind economical working. Arrangements with auxiliary brushes may be used.

Explain why the above arrangement is more efficient than using only series resistances to reduce the voltage of supply to 60 or 70 volts.

4. A shunt wound dynamo has an output of 20 K.W. at 200 volts, and runs at 400 R.P.M. If the armature has a resistance of 0.015 ohms and that of the field is 100 ohms, what will be the speed if the machine is run as a motor taking 20 K.W. at 200 volts?

## MATERIALS OF CONSTRUCTION

*The questions are of equal value in EACH half.*

Examiners— { MR. A. JABBAR, B.E.  
„ M. N. MUKHERJEE, B.E.

## FIRST HALF

*Only FOUR questions to be attempted from this half*

1. Name the different road metals in common use in this country, and discuss briefly their suitability for road construction.

2. What are the reasons and remedies for pitting or popping of interior plaster? How will you test whether a plaster is likely to give rise to pitting or popping immediately after it is made?

3. What is a pozzolana? Name some such substances used in Bengal. How can you test this property practically or compare one pozzolanic substance with another?

4. What is white distempering? How does it differ from ordinary lime wash? What is a cold water paint? Give a recipe for water colouring as specified by the Bengal P.W.D.

5. What materials will you use for 1" artificial stone flooring, particularly if the floor is to be made white?

#### SECOND HALF

*Only FIVE questions to be attempted from this half.*

1. What is dry rot in timber? How do you detect it? What will you do to protect the timber from such dry rot?

State the different kinds of timber used in ordinary Calcutta residential houses, and the purposes for which they are used.

2. State very briefly the principles upon which the relative position of the concrete and of the principal steel members in ferro-concrete beams are determined.

In erecting a steel framed building, how would you protect the stanchions and beams from fire?

3. What is the natural bed of a stone? Why should stones be set in a building upon this bed?

Describe the characteristic qualities of slate, sandstone, and marble.

4. What are the general ingredients of oil paint, and what is the object of each?

What precaution would you take before painting wood and iron work?

5. What is a tile? State the different kinds of tiles used in building and the purpose for which each is used.

6. What are the characteristics of cast iron and wrought iron? For what purpose is each used in building construction?

7. Give specifications of a 6" thick flat terraced roof over a room measuring 40' x 10', mentioning the quantities and quality of the different kinds of materials to be used.

#### DETAILS OF CONSTRUCTION

Examiners— { Mr. C. V. MILLER.  
                  ,, KHANBAHADUR TAFAZZAR AHMED.

*The figures in the margin indicate full marks.*

#### FIRST HALF

*Only FOUR questions are to be attempted in this half.*

1. (a) Write a short critical note on the different kinds of piles used in engineering construction. 45

(b) Evolve from first principles Wellington's formula for the safe load that can be carried by a pile.

2. Draw neat sketches showing the longitudinal section and plan of a staircase, and on your sketches write down the following in their correct places: Tread, Nosing, Riser, Winder, Baluster, Pitch-board, Newel, Stringer, Quarter span landing, Capping, Going, Kite-winder, Swanneck, and Ramp. 50

What is the least headroom that should be given on a staircase?

Draw a detailed section, showing how the handrail is fitted on.

State the generally adopted ratio between risers and treads.

3. What is 'camber' in a road, and why is it necessary?

Draw a transverse section through a metalled road, as constructed by the P.W.D., showing (a) a Premix carpet surfacing, and (b) a Shell-crete carpet surfacing.

State in detail how (a) and (b) are applied.

45

4. (a) Draw neat freehand sketches showing the sections of the different kinds of roofs in common use in Bengal, and (b) describe in detail, with the aid of sketches, the method of construction of an ordinary Tee and Halka tiled roof.

What are the defects of an ordinary tee and flat tiled roof, and how far has the Halka tiled roof succeeded in overcoming these defects?

45

5. The garage attached to an officer's quarters is 18 feet by 8 feet (internal dimensions) in plan. It is covered by a sloping tiled roof (gable ends) supported on a ridge pole, wall plates, rafters and battens. The slope of the roof is 1 in 2. Assuming that the weight of the roof including tiles, battens, etc. is 30 lb. per square foot and the rafters are placed 6 feet apart, design the rafters, battens, and ridge pole, assuming they are of teak, for deflections to suit the roof.

Draw a neat transverse section of the roof, showing all details including the fixing of the roof to the walls and ridge pole. The walls may be assumed 10 inches thick.

60

VALUES OF  $bd^3$ 

Depth $d''$	BREADTH $b''$					
	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{3}{4}$	3
1	1.7	2.0	2.2	2.5	2.7	3.0
$1\frac{1}{2}$	3.4	3.9	4.4	4.9	5.4	5.9
$1\frac{1}{2}$	5.9	6.7	7.6	8.4	9.3	10.1
$1\frac{3}{4}$	9.4	10.7	12.1	13.4	14.7	16.1
	14.0	16.0	18.0	20	22	24
$2\frac{1}{4}$	19.9	23	26	28	31	34
$2\frac{1}{2}$	27	31	35	39	43	47
$2\frac{3}{4}$	36	42	47	52	57	62
3	47	54	61	67	74	81
$3\frac{1}{2}$	75	86	96	107	118	129
4	112	128	144	160	176	192
$4\frac{1}{2}$	159	182	205	228	251	273
5	219	250	281	312	344	375
$5\frac{1}{2}$	291	333	374	416	458	499
6	378	432	485	540	594	648
$6\frac{1}{2}$	481	549	618	687	755	824
7	600	686	772	857	943	1029
$7\frac{1}{2}$	733	844	949	1055	1160	1266
8	896	1024	1152	1280	1408	1536
9	1276	1458	1640	1822	2005	2187
10	1750	2000	2250	2500	2750	3000
12	3024	3456	3888	4320	4752	5184



## SECOND HALF

Only THREE question to be answered, of which Question 1 is compulsory.

1. The attached sketch gives the section of a wall in a situation where the width of the foundation cannot be extended, and where the bearing capacity of the existing soil is 90 tons per s.ft. To make the foundation strong enough to bear the incumbent weight and to increase the bearing capacity to 1 ton per s.ft. sal bullah piles 9" dia. are to be used. Test piles show the following particulars:—

Set  $\frac{1}{4}$ ", drop of monkey 6 ft., weight of monkey 3 cwt. Sketch the foundation in plan, and show at least 6 piles with their distances from each other and from the edges. 80

2. Sketch an arch 1' 8" thick (brickwork), span 12 ft., rise 3 ft. on abutments 2' 6" wide at the top with a batter of 1 in 8. Show the joints of bricks in the ring and name all the different parts of the arch. Make drawings showing cross section and longitudinal section of the wooden centring required for the above arch. 60

3. Give the cross section of an ordinary water bound macadam road 12 feet wide metalled portion, side widths six feet each, height of bank four feet, side-slopes one in one and a half, berms five feet each. Borrowpits on both sides 1' 0" deep, width according to the height of the bank. Describe briefly and systematically all the processes involved in constructing such a road from beginning to completion. 60

4. Give the cross section sketch of a wooden kingpost roof truss span 16 feet supporting a Ranegunj tiled roof on wooden battens. Sections of scantlings required to be given by the examinee. The trusses are 4 feet apart. Name the different members, and show details of joints. What are hip, valley, and jack rafters? Give sketches. 60

## ESTIMATING

Examiners - Mr. A. JABBAR.  
„ D. N. SENGUPTA, B.E.

## FIRST HALF

The figures in the margin indicate full marks.

1. *Either,*  
Prepare an indent for the materials required for the reservoir (shown in Plate 1), measuring 20 feet by 12 feet internally. 100

*Or,*  
Estimate the weight of the casting (shown in Plate 2). The metal weighs 28 lb. per cubic inch. 100

## SECOND HALF

The questions are of equal value.

Answer either FOUR questions only from Part A or the question in Part B.

## PART A.

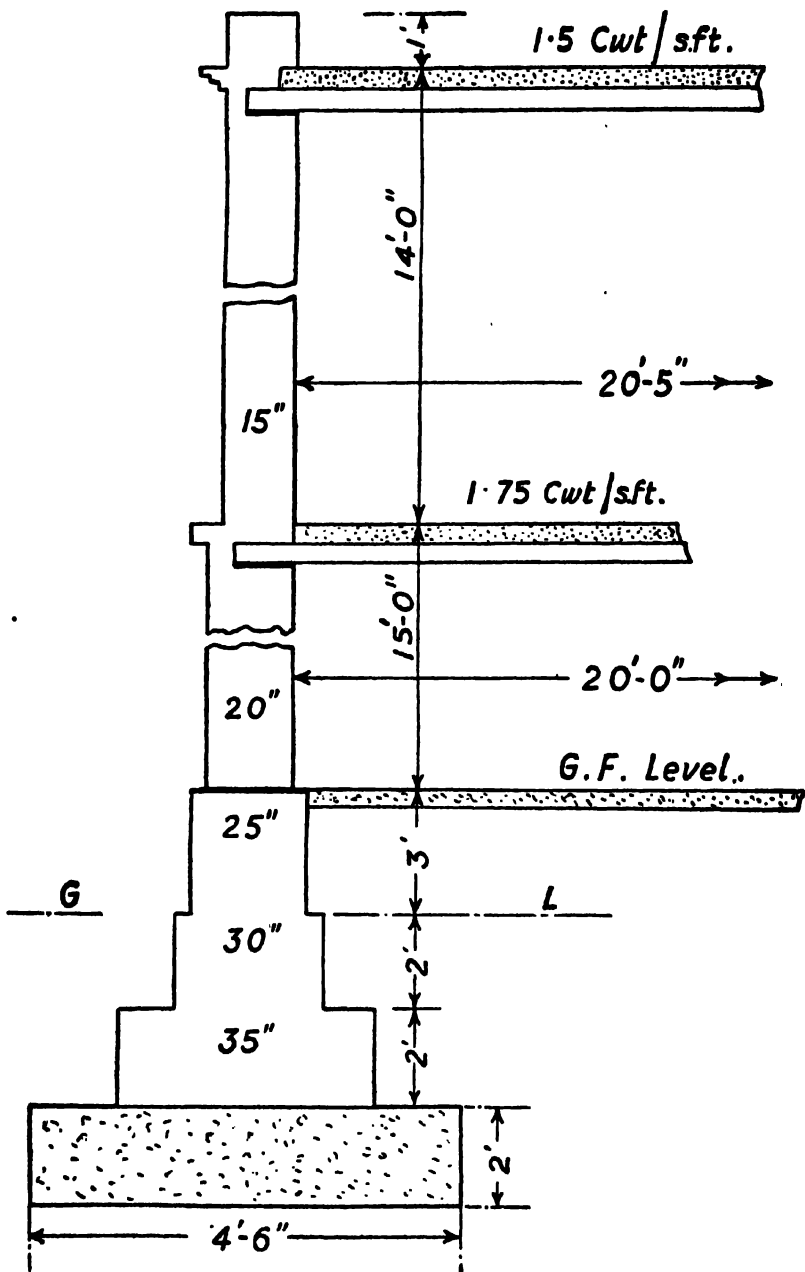
1. In the building illustrated by the accompanying drawings (Plate 8), find out the total quantity of damp proof course.

2. In the same building as in Question 1, find out the total quantity of masonry in foundation and plinth.

3. In the same building as in Question 1, find out the total quantity of woodwork in doors and windows. The chowkats will be made of 4" x 8" scantlings.









4. Earth is to be obtained for filling in the plinth of a building to a depth of 8 feet. Area of filling =  $80' \times 20'$ . If earth is loose alluvial soil and if it is to be measured in a loose condition, find out the total quantity of earth that should be indented for the work.

5. Assuming that the concrete in the foundation of the building in Question 1 will be done with  $1\frac{1}{4}"$  size brick ballast and soorkie and lime mortar mixed in the proportion of 2 : 1, find out the quantities of the different materials that should be indented for the concrete.

### PART B.

1. Find out the quantity of material involved in the Bell Crank Lever illustrated in the drawings given in Plate 4. Metal to be used in making the lever is steel weighing 0.28 lb. per cubic inch. 100'

## SURVEYING

Examiners— { MR. P. B. GHOSH, B.Sc., B.E.  
                  ,, K. L. GANGULI.  
                  ,, P. B. GHOSH, B.Sc., B.E.

*The questions are of equal value.*

*Only FOUR questions are to be attempted from EACH half.*

### FIRST HALF

1. Distinguish between 'compensating' and 'cumulative' errors in chaining. Illustrate your answer by examples.

The plan of an old survey plotted to a scale of 41.66 ft. to 1 inch was found to have shrunk so that a line originally 10 inches long was only 9.86 inches. There was also a note stating that the chain was 0.2 link too long. If the area of the plan given by a planimeter was 34.76 square inches, calculate the correct area of the survey in acres.

2. You are issued with a Prismatic Compass which has been lying unused for some time. Describe in detail how you would examine the instrument to see whether it is fit for use in accurate work.

In a Prismatic Compass survey the following field observations which are all correct were recorded:—

Line	Forward Bearing	Backward Bearing	Length	Remarks
AB	65°—30'	245°—30'	200 ft.	
BC	125°—0'	302°—0'	250 ft.	
CD	281°—30'	54°—30'	300 ft.	
DA	—	—		

Plot the above survey to a scale of 100 ft.=1 inch. Show on your sketch all the interior angles of the plot surveyed. Write down the length, forward and back bearings of the line  $DA$ . Fill up the 'remarks' column with any remark that you may have to make.

3. Write explanatory notes on the following with the aid of sketches:—

- (1) A 'give and take' line
- (2) Repeating an angle.

Explain, with the help of sketches, the principle and method of use of an optical square. Describe also how you would test the instrument as regards its permanent adjustment.

4. State the common sources of error in levelling.

Describe, with the aid of sketches and assumed data, how you would obtain the correct difference of levels between two points on opposite banks of a river.

In levelling across a river, the following readings were recorded at two points  $X$  and  $Y$  on the opposite banks of the river:—

With instrument near $X$	{ Staff reading at $X=6.96$ .
	{ Staff reading at $Y=4.74$ .
With instrument near $Y$	{ Staff reading at $X=9.78$ .
	{ Staff reading at $Y=7.36$ .

If the reduced level of  $X=764.81$ , find that of  $Y$ .

5. What is meant by the sensibility of a bubble tube?

Give a method of finding the radius of curvature of the bubble tube of a levelling instrument.

Describe clearly, with neat sketches, how you read a small vertical angle with the help of a levelling instrument.

6.  $A$  and  $B$  are two points (fig. 1 below) on one side of a nullah which you cannot cross. You are standing on the ground at  $C$  on the other side of the nullah with a theodolite, a chain and a few arrows. Describe, with sketches and assumed data, how you will find the horizontal distance between the points  $A$  and  $B$ .

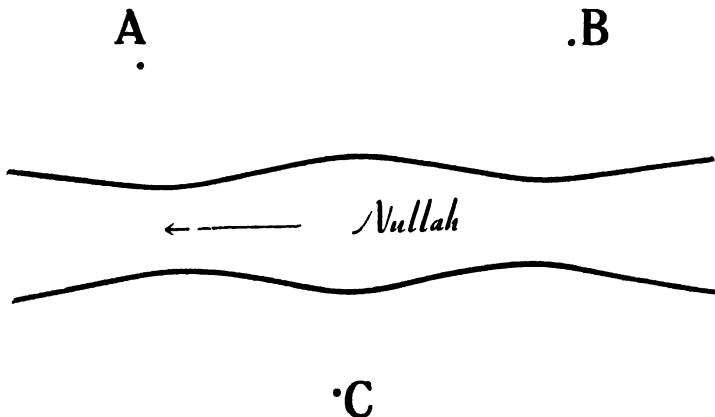


Fig. 1.

sup-  
full  
king

50  
40  
oved.  
60

Main dimensions are to be shown on each view.





## SECOND HALF

1. Write a short essay on Chain Survey with particular reference to the following points:—

- (a) For what kind of work is this method of survey generally used?
- (b) What are the necessary equipments?
- (c) The principle of the survey;
- and (d) The method of procedure.

2. What is meant by Contouring? How would you contour a hilly country? Describe how you would fix and plot the contour lines of a survey. Show, by diagram, how to find the cubic contents of a reservoir from contour.

3. A Railway line has to be deflected to the right by  $22\frac{1}{2}^\circ$  at chainage 10'4". Describe, by sketches and calculations, how a  $2^\circ$  curve should be set out. Calculations should be shown in proper form as entered in a Field Book.

*Note.*—The instrument has to be shifted at chainage 17'0" due to an obstruction.

4. For building a bridge across a river, soundings have to be taken from a boat to determine the cross-section of the river bed. Give a list of necessary equipments, and describe how the work is to be done.

Assume a set of data, and give calculations for determining the position of one of the points of sounding on the map.

5. In a Dumpy level the spirit level, the vertical axis and the line of collimation are all out of adjustment.

Explain clearly with the help of neat sketches how the defects should be rectified.

6. A four-sided transverse  $ABCD$  has the following lengths and bearings:—

<i>Side.</i>	<i>Length in feet.</i>	<i>Bearing.</i>
$AB$	500'	Roughly East
$BC$	24'	$178^\circ$
$CD$	Not obtained	$270^\circ$
$DA$	216'	$1^\circ$

Find the exact bearing of the side  $AB$  and the length  $CD$ .

## DRAWING

Examiners— { Mr. C. R. COPELAND.  
 „ NABI BAKSH, B.Sc.  
 „ ABDUL JABBAR.

*The figures in the margin indicate full marks.*

## FIRST HALF

Dimensioned details of a valve rod guide for a locomotive are supplied.

**Do not draw** the details detached from each other, but make a full size scale drawing, showing all the parts assembled in their working positions, and giving the following views:—

- 1. The main sectional elevation. 50
- 2. The sectional end view on  $AB$  and  $CD$ . 40
- 3. Project a complete plan from view 1, but with oilbox lid removed. 60

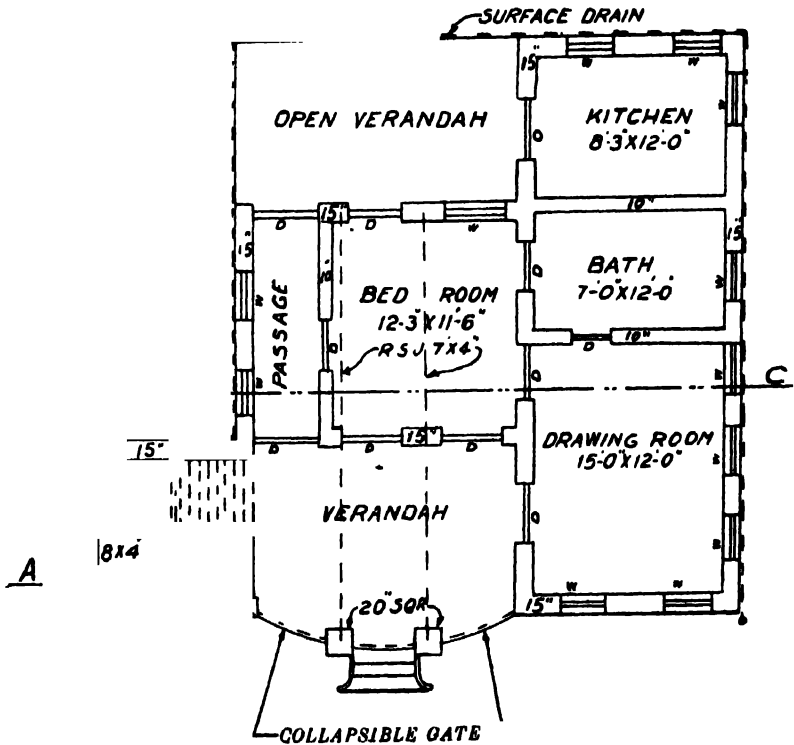
Main dimensions are to be shown on each view.

SECOND HALF

1. Fig 1 represents the plan of a small single-storied building :—
  - (a) Copy the plan. 40
  - (b) Draw a suitable front elevation. 80
  - (c) Draw a fully dimensioned cross-section along ABC, assuming depth and width of foundation to be 3' 0" and 2' 6" respectively. 60

Fig. 1

PLAN AT PLINTH LEVEL.



SCALE 8 FT. = 1 INCH.

I. E. (B)—Draw.

# B. E. Examination 1935

(Non-Professional)

## MATHEMATICS—THEORIES

(C. E. and M. E.)

Examiners—  $\left\{ \begin{array}{l} \text{DR. S. R. SENGUPTA, PH.D.} \\ \text{MR. P. L. GANGULI, M.A.} \end{array} \right.$

*The questions are of equal value.*

### FIRST HALF

*Attempt ANY THREE questions from this half.*

1. (a) Find the following limits—

(i)  $\lim_{x \rightarrow \infty} L \frac{x^2 + 1}{x^3 - 1},$

(ii)  $\lim_{x \rightarrow 0} L \sin x \log x,$

(iii)  $\lim_{x \rightarrow \infty} L x e^{-x}.$

(b) Give an analytical definition of the 'Integral' and prove from first principles, that

$$\int_a^b \cos x \, dx = \sin b - \sin a.$$

2. (a) Show in a diagram the field of integration of

$$\int_0^4 dy \int_{\frac{1}{2}(4-y)}^{\sqrt{4-y}} \frac{(x-1)^2 dx}{\sqrt{4-y-x^2}}$$

then change the order of integration, and show that the value of this integral is  $\pi/4$ .

(b) A uniform triangular lamina of mass  $M$ , is bounded by the  $x$ -axis and the lines  $y=2x$ ,  $x+y=3$ , show that its moment of inertia about the  $y$ -axis is.

$$\frac{M}{3} \int_0^2 dy \int_{\frac{1}{2}y}^{3-y} x^2 dx$$

and evaluate this integral.

3. (a) Assuming that  $f(x)$  can be expanded in a trigonometric series of the form

$$\frac{a_0}{2} + \sum_{m=1}^{\infty} a_m \cos mx + \sum_{m=1}^{\infty} b_m \sin mx; \quad -\pi < x < \pi$$

obtain the coefficient  $a_m$ .

(b) *Either,*  
Obtain an expansion for  $f(x) = x \cos x$ ;  $0 < x < \pi$ .

*Or,*

Obtain a trigonometric series for  $f(x)$ , for  $0 < x < 2$ ,

if  $f(x) = 4(x - x^2)$  for  $0 < x < 1$   
 $f(x) = 1$  for  $1 < x < 2$

and write down the series as far as the term given by  $m=6$ .

4. The displacement  $y$  millimetres, of a slide block from a fixed point in its path is measured for

$$x = 0, \frac{\pi}{6}, \frac{2\pi}{6}, \dots, 11\frac{\pi}{6};$$

where  $x$  is the angle of rotation of the crank pin. The readings in order are—

392, 474, 494, 467, 398, 294, 173, 64, 17, 51, 148, and 278.

Find by Runge's method an approximate Fourier's series for  $y$  in terms of  $x$ . Check your result against data for the case of

$$x = 0, \frac{\pi}{2}, \pi \text{ and } \frac{3\pi}{2}.$$

5. Solve the equations:—

(a)  $\frac{1}{2} (l+x) \frac{dy}{dx} + y = lg$ ;  $l, g$  are constants.

(b)  $\frac{dy}{dx} = \frac{y}{2x} - \frac{x}{2y}$ ; given that  $y=0$ , when  $x=1$ .

(c)  $\frac{d^2y}{dx^2} + 4 \frac{dy}{dx} = \sin x - \cos x$ .

6. The angular velocity of the governor of a steam turbine for stable motion is given approximately by

$$\frac{d^3\omega}{dt^3} + 3 \frac{d^2\omega}{dt^2} + 4 \frac{d\omega}{dt} + 2\omega = 80.$$

Prove that the complementary function of above becomes negligible when  $t$  increases sufficiently.

For unstable motion or 'hunting' the corresponding differential equation is

$$\frac{d^3\omega}{dt^3} - \frac{d^2\omega}{dt^2} + 2\omega = 80.$$

Obtain a solution and show that the complementary function oscillates with increasing amplitude.

## SECOND HALF

*Only FOUR questions to be attempted from this half.*

1. Define *convergency*, *absolute convergency*.

Shew that the infinite series

$$u_1 + u_2 + u_3 + \dots$$

is convergent or divergent according as

$$\lim (u_n)^{\frac{1}{n}} \text{ is } < 1 \text{ or } >$$

Test the convergency of the series

$$x + \frac{2^2 x^2}{2!} + \frac{3^2 x^3}{3!} + \frac{4^2 x^4}{4!} + \dots$$

2. Prove that, if two rows or two columns of a determinant are identical, the determinant vanishes.

Shew that

$$\begin{vmatrix} a-b-c & 2a & 2a \\ 2b & b-c-a & 2b \\ 2c & 2c & c-a-b \end{vmatrix} = (a+b+c)^3.$$

Calculate the value of

$$\begin{vmatrix} 67 & 19 & 21 \\ 39 & 13 & 14 \\ 81 & 24 & 26 \end{vmatrix}.$$

3. Prove—

$$\cos a = 1 - \frac{a^2}{2!} + \frac{a^4}{4!} - \dots$$

Examine the convergency of the above series assuming De Moivre's theorem.

Find the three values of  $(1 + \sqrt{-1})^{\frac{1}{3}}$ .

4. Given

$$\sin \left( \frac{\pi}{6} + \theta \right) = .51,$$

find approximately the value of  $\theta$ , neglecting powers of  $\theta$  above the second.

If  $\sin x = n \sin (x+a)$ , prove that

$$x = n \sin a + \frac{n^2}{2} \sin 2a + \frac{n^3}{3} \sin 3a + \dots$$

5. Prove—

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta - \dots$$

where  $\theta$  lies between  $-\frac{\pi}{4}$  and  $+\frac{\pi}{4}$ .

If  $a$  and  $b$  be the sides of a plane triangle,  $A$  and  $B$  the opposite angles, shew that

$$\log b - \log a = \cos 2A - \cos 2B + \frac{1}{3} (\cos 4A - \cos 4B) + \frac{1}{5} (\cos 6A - \cos 6B) + \dots$$

# MATHEMATICS—APPLICATIONS

Examiners—  $\left\{ \begin{array}{l} \text{DR. S. R. SENGUPTA, PH.D.} \\ \text{,, JYOTIRMAY GHOSH, D.Sc.} \end{array} \right.$

*The questions are of equal value. •*

*Only THREE questions are to be attempted from EACH half.*

## FIRST HALF

1. A particle moves in a straight line under a force which is always directed towards a fixed point in the straight line and is proportional to the distance from it. Discuss the motion fully.

An elastic string, of which the unstretched length is  $l$  and the modulus of elasticity is the weight of  $n$  oz., is suspended by one end, and a mass of  $m$  oz., is attached to the other ; shew, neglecting the mass of the string, that the time of a vertical oscillation is

$$2\pi \sqrt{\frac{ml}{ng}}.$$

Deduce the period, taking into account the mass of the spring.

2. A particle of unit mass is projected with velocity  $u$  at an inclination  $\alpha$  above the horizon in a medium whose resistance is  $k$  times the velocity. Shew that its direction will again make an angle  $\alpha$  with the horizon after a time

$$\frac{1}{k} \log \left\{ 1 + \frac{2ku}{g} \sin \alpha \right\}.$$

3. A uniform chain suspended at two points hangs under gravity. Find the equation of the curve assumed by it and also an expression for the tension at any point.

Shew that the form of the curve near the lowest point is approximately a parabola.

A uniform heavy chain, of length 155 ft., is suspended from two points in a horizontal plane which are 150 ft. apart ; shew that the tension at the lowest point is nearly 1.08 times the weight of the chain.

4. Give a mathematical description of the parabola of the suspension bridge.

The whole load of a suspension bridge is 200 tons evenly distributed over its horizontal span, which is 150 ft., and its height is 20 ft.; shew that the tensions at the lowest point and at the points of support are  $187\frac{1}{2}$  and  $212\frac{1}{2}$  tons weight respectively.

## SECOND HALF

1. (a) State and prove Townsend's Theorem for the moment of inertia of a solid ring about its axis.

(b) Find the moment of inertia of an anchor ring of elliptic section about its axis, mean radius of the ring is 3 inches. The major and the minor semi-axes of the ellipse are 0.3 and 0.1 inch respectively, the major axis being parallel to the axis of the ring. Weight of metal is 0.28 lb. per cubic inch.

2. (a) Give a clear exposition of the d'Alembert's principle, and obtain expressions for the kinetic energy for motion in two dimensions.

(b) A uniform 2 inch diameter rod of 10 feet length is free to turn about a fixed horizontal axis at its end. Find the position of the centre of oscillation and the length of the equivalent simple pendulum.

(c) If the rod comes to rest when it is just vertical, determine the position of the bar when the component of the reaction along the centre line of the bar changes sign, and find the maximum minimum values of the two components of reaction. Weight of material is 0.28 lb. per cubic inch.

3. A governor can be regarded as consisting of two equal arms of length 8 inches and of diameter 0.5 inch, with two spherical masses of 1.5 inch diameter each at the free ends. It is found to execute 80 revolutions per minute. Find the angle made by the arms with the axis of rotation, and the stresses set up in each arm. Weight of material is 0.28 lb. per cubic inch.

4. The jib of a small crane is of rectangular cross section (6 inch  $\times$  4 inch) and 12 feet long. It is initially kept at an angle of  $30^\circ$  to the vertical by a tie which suddenly snaps, and the jib strikes a fixed object at a distance of 10 feet from its pin end. Find the magnitude of the impulse and the pressure at the pin end due to the sudden drop. Weight of material is 0.25 lb. per cubic inch.

5. (a) Obtain an expression for the metacentric height, and find the conditions of equilibrium and of stability of a body floating freely on the surface of a liquid at rest.

(b) A rectangular pontoon is 60 feet long and 20 feet wide, and together with a crane load of 20 tons weighs 180 tons. The crane and its load is at first central. Find the angle of heel produced when the load is slewed over to the side 20 feet from the centre line. The centre of gravity of the pontoon and crane is 4 feet from the bottom of the pontoon. Take 36 cubic feet of water to weigh 1 ton.

6. One wall of a tank slopes inwards from the bottom at angle of  $30^\circ$  to the vertical, and contains a triangular door  $ABC$  which can open outwards. It is hinged about the horizontal side  $BC$ , and is 500 lb. in weight and of area 2 square feet. The vertex  $A$  is 2 feet vertically below  $BC$ . Show that if water be poured into the tank to a height  $h$  above  $A$  so that the trap door is entirely below the surface, it will remain closed provided that  $h$  is less than 3 feet. Weight of water is 62.5 lb. per cubic foot.

## C.E.

### GEOLOGY AND MINERALOGY

Examiners— } RAJ BAHADUR A. K. BANERJEE.  
                  } MR. R. GEE.

*The questions are of equal value.*

*Only FOUR questions are to be attempted from EACH half.*

#### FIRST HALF

1. What do you understand by the axial ratio of a mineral? The axial ratio of olivine is  $0.46575 : 1 : 0.58651$ . What would be the indices of faces whose intercepts are (a)  $0.93150 : 1 : 1.17302$ , and (b)  $\infty : 1 : 1.17302$ ?

Give with their indices the forms that occur in the orthorhombic system, normal class, barytes type.

2. Give a list of the minerals that form the pyroxene group with their crystal systems, and state how they differ from one another in chemical composition.

Give the composition and commercial uses of cassiterite, chrysotile, fluorite, muscovite, and talc.

3. Describe syenite, diorite, dolerite, rhyolite, and basalt. Give their position in the classification of igneous rocks, and explain how the texture



in each case is determined by their mode of consolidation. Discuss the suitability of these rocks for engineering purposes and the chances of obtaining water by sinking wells in areas occupied by these rocks.

4. Describe and explain the changes that take place near the surface and at depth in sulphide ore deposits through the action of descending surface waters.

5. Explain how the direction and amount of the true dip of a bed may be determined if the apparent dips of the bed in two directions are known.

#### SECOND HALF

*(Illustrate your answers with sketches wherever possible.)*

1. Describe briefly the various types of sedimentary rocks. By what evidence would you draw conclusions regarding the conditions under which a particular sedimentary rock was deposited?

2. What is meant by metamorphism? Describe the various types of metamorphism.

3. Discuss briefly the following geological structures: (a) asymmetrical anticline, (b) reversed fault, (c) pitching syncline, (d) horst, (e) isoclinal folding. Illustrate your answer with sketches.

4. Give an account of the geological sequence and structure of *either* the Raniganj *or* the Jharia coalfield.

5. Discuss the question of sites for dams and reservoirs.

### APPLIED PHYSICS

Examiners—

{ MR. A. C. CHAKRABARTI, M.Sc., M.A.(CANTAB).  
DR. W. JENKINS, D.Sc.

*The questions are of equal value.*

*THREE questions only to be answered from EACH half.*

#### FIRST HALF

1. Explain fully why a refrigerating machine must satisfy the conditions of thermodynamical reversibility in order to have ideal efficiency. Find the coefficient of performance of such a refrigerator.

2. An electric motor developing 5 B.H.P. drives a refrigerator which produces ice at the rate of 100 kilogrammes per hour from water fed at atmospheric temperature which is 30°C. How efficient is it compared to an ideal refrigerator?

3. Describe a Platinum-Resistance pyrometer as used for recording varying furnace temperatures. How is the instrument calibrated?

4. Fully describe the Redwood Type I viscometer. How is the instrument standardized?

5. Calculate the intensity of illumination on a table of height 3' placed centrally inside a room whose floor measures 18' x 18' when the source of light is an electric lamp of 25 c.p. fixed centrally on a wall at a height of 8' from the floor (reflection of light by the walls may be neglected).

Define 'Lux'. How is it related to 'Foot-candle'?

#### SECOND HALF

6. Write an essay on *one* of the following subjects:—

- (a) The nature of light.
- (b) Ultra-violet rays.
- (c) Polarisation.

7. Write short notes on *three* of the following:—
- (a) The Heavyside Layer.
  - (b) Short wave Reception.
  - (c) Atmospherics.
  - (d) The principle of the Super-Heterodyne receiver.
8. Under what conditions is a gas (a) a reasonably good conductor of electricity, (b) a bad conductor?
- Describe the phenomena observed in a discharge tube when a difference of potential of say 30,000 volts is applied to its terminals and the pressure inside the tube is gradually reduced from atmospheric pressure to '0001 mm.
9. Describe experiments illustrating—
- (a) the transformation of light into electricity ;
  - (b) the transformation of heat into electricity ;
  - (c) the transformation of heat into light ;
  - (d) the transformation of light into heat ;
  - (e) the transformation of electricity into light.

## M.E.

### APPLIED PHYSICS (METROLOGY)

Examiners— { Mr. J. RIFFIKIN.  
 „ L. W. J. MASON, A.C., G.I., A.M.I. MECH. E.

*The questions are of equal value.*

*Not more than THREE questions to be attempted from EACH half.*

#### FIRST HALF

1. A short sleeve having a nominal internal diameter of 12" is to form a 'forced-fit' with a shaft. The mean allowance for the class of fit selected is to be 0.020". The total tolerance for machining (hole plus shaft) is to be 0.006", two-thirds of this being apportioned to the hole and the remainder to the shaft. A bilateral system of limits, having the hole as basis, is to be adopted, the hole tolerance being equally distributed with respect to the nominal size. Calculate the limiting dimensions of both hole and shaft, and illustrate by a neat sketch.

2. What are the advantages claimed for straight-edged tools, and what disadvantages may arise in their use, especially at high cutting speeds?

What advantages are claimed for round-nosed tools?

Show how round-nosed tools may eliminate chatter when cutting.

Sketch and give particulars for a suitable tool to take heavy cuts on annealed forgings.

3. Given the cylinder block of a light motor car, describe with the aid of sketches how you would measure the cylinder bores for wear. Under what circumstances would you recommend: (a) re-boring, etc.; (b) honing, etc.; (c) new piston rings only?

4. Sketch a micrometer depth gauge, and show a setting of 0.568 inch. Do *not* describe the mechanism but insert index letters with a key to show the important details.

Explain how a Vernier may be embodied on a micrometer to read to 0.0001 inch.

5. Write a short note on the development in materials for metal-cutting tools, noting specially the new materials of the past ten years. For what applications are these particularly useful?

What are the special features of a circular form cutter, and state two applications of its use in practice.

## SECOND HALF

1. What is the process known as case-hardening? Explain in detail how you would case-harden a number of small mild steel articles to produce a case of  $\frac{1}{32}$ " thick. How is the grain structure of the core refined?

2. You are required to produce 500 Castellated nuts as per Fig. 1. Hexagonal mild steel bar material to size is supplied.

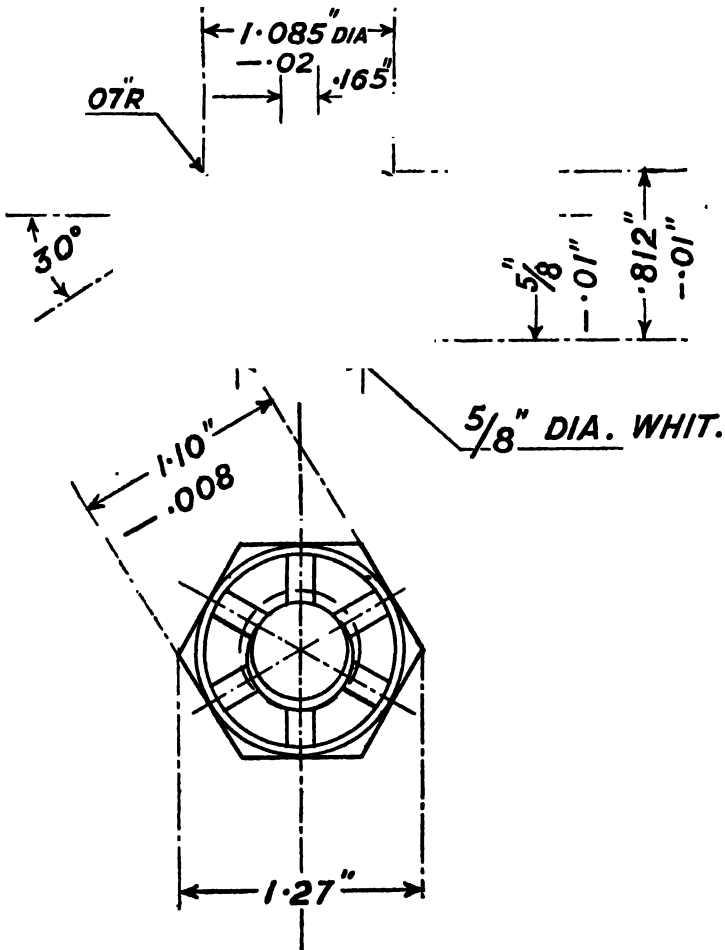


FIG. 1.

Detail an operation lay out suitable for the quantity required. What production per hour would you expect? State what machines you would use, and sketch the tools required.

3. What do you understand by the term No. 2 to No. 3 Morse Taper socket? Explain in detail how you would measure a No. 2 Morse Taper plug gauge at three points in its length.
4. How would you measure an 1" diameter Whitworth Standard screwed plug gauge? What errors may occur in the manufacture of a screw gauge, and how would you detect such errors?
5. Fig. 2 attached shows a locating block for a small milling fixing, which is machined all over to close limits. Explain in detail how you would inspect the block, paying particular attention to the alignment of the three holes with each other, and their location from face *AB*.

## APPLIED PHYSICS (METROLOGY) PRACTICAL

Examiners— { Mr J. RIFFIKIN.  
                  { „ L. W. J. MASON, A.C., G.I., A.M.I. MECH. E.

*The examiners will detail the particular test or tests you are required to attempt.*

*Submit your results according to the following scheme; give neat sketches where necessary:—*

- (a) *Object of the test.*
- (b) *Apparatus used.*
- (c) *Procedure adopted.*
- (d) *Calculations,*
- (e) *Observations and deductions.*

### 1. Jig Measurements:—

In the manufacture of the given small jig, it is essential that the three holes should be correct to 0.001"—

- (a) in diameter;
- (b) in position with relation to sides *AB* and *BC*;
- (c) in relation to each other.

The radius *CD* is not so important but should be correct to 0.01". Similarly, the inclined face *EF* should be correct to 0.50°.

Inspect the jig to the nominal sizes given in Fig. 1, and state whether it is acceptable to the limits as stated above.

### 2. Button Gauge:—

Set the five buttons in a circle of 4 inches diameter on the given plate in which there are five approximately located tapped holes. You are *not* required to locate the centre of the circle.

The diameter of the buttons may be measured with the aid of the Zeiss Optotest machine.

### 3. Crosshead Pin:—

The crosshead pin provided has been supplied to satisfy an order which stipulates case hardening and grinding. The pin should be rejected. Why?

Carefully measure the crosshead pin, and record your measurements on a freehand dimensioned sketch of the pin.

*N.B.*—The internal threaded portion need *not* be measured.

### 4. Testing of Measuring Tools:—

Micrometers sometimes get out of adjustment, and dial gauges often have slight errors over their range. Given a set of slip gauges known to be correct, check the accuracy of the micrometer and the dial gauge provided at ten points within their respective ranges, and draw calibration curves illustrating any inaccuracies that you may find.

## 5. Angle Gauge:—

Measure the angle gauge provided.

## 6. Wickman Adjustable Caliper Gauge:—

Set the gauge for a  $\frac{1}{8}$  inch nominal diameter to satisfy a class Z running fit. High limit = 0.00075; low limit = 0.00125; tolerance = 0.00050.

Having set the gauge to the given requirements, inspect the given spindles, and state definitely how many you would pass.

## 7. Splined Shaft:—

You are given a splined shaft which is supposed to be correct to drawing (Fig. 2) in the following:—

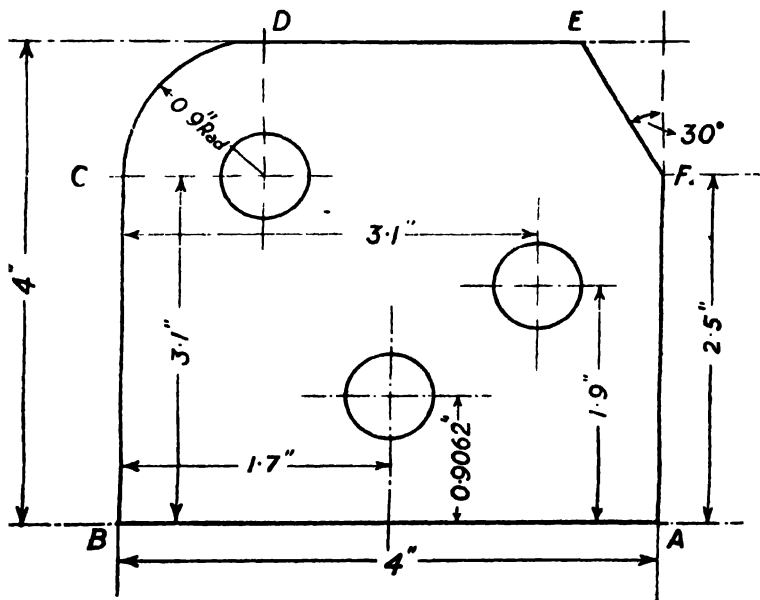
- (a) External diameter.
- (b) Width of splines.
- (c) Height of splines.
- (d) Equality of spacing of splines.

Measure the shaft provided and record your results. If the allowable limits are  $\pm 0.0020$  on the nominal sizes, state whether you would accept or reject the shaft, giving definite reasons for your action.

## 8. Form Gauge:—

A large form gauge with symmetrically curved edges of  $5\frac{1}{4}$  inch radius is supplied. The centres of the curved edges are located on a continuation of the datum of the gauge.

You are required to check the curved edges of this gauge. Are the curved edges truly arcs of a circle?



All holes  $\frac{1}{8}$ " dia.

Two ground plugs,  $\frac{1}{8}$ " dia. are supplied.

FIG. 1.



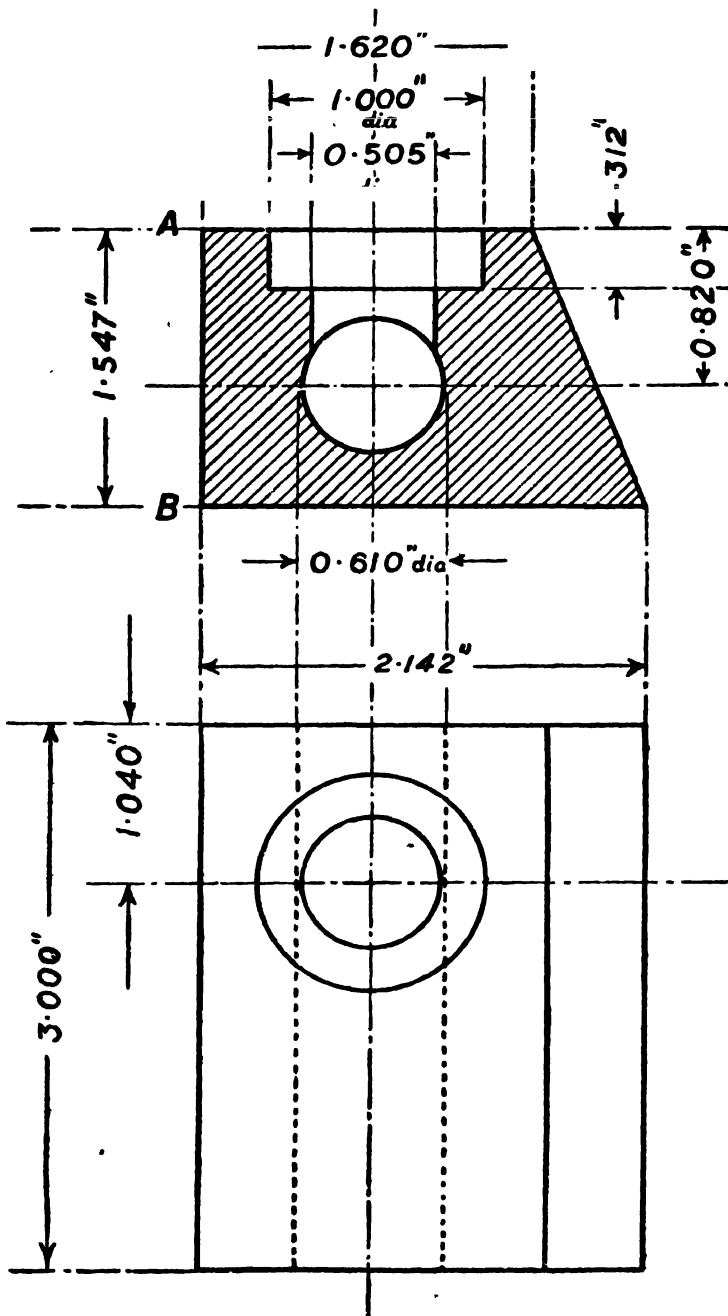
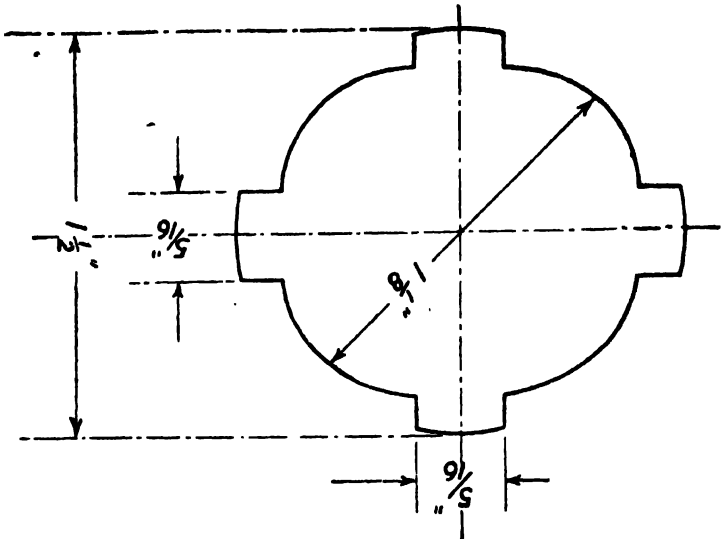


FIG. 2.



Splined shaft approx. 4" long.

FIG. 2.

**C.E.****ROADS AND RAILWAYS**

Mr. P. B. GHOSH, B.Sc., B.E.

Examiners—

„ J. N. DASGUPTA, B.E.

*The questions are of equal value.**Only FOUR questions are to be attempted from EACH half.***FIRST HALF**

1. Describe, with sketches, the points to be attended to in order to make the earthwork in embankment and cutting of a railway 'good and serviceable'.

Write a note on the ballasting of a new embankment.

2. Explain what is meant by 'superelevation' and 'cant'. Explain clearly why and how superelevation is given to a railway curve.

What amount of superelevation should be provided on a curve of  $3^\circ$  on the 5'-6" gauge, the speed being 50 miles per hour?

Determine the length of the chord such that the middle ordinate in inches will give the superelevation on any curve where the gauge and speed are the same as above.

What is the maximum permissible superelevation in a railway curve?

3. What is a vertical curve? Explain why and where it is used. What form of vertical curve is used in a railway? Give reasons.

Suppose a grade of  $\frac{1}{4}\%$  up suddenly changes to  $\frac{3}{8}\%$  down, what length of vertical curve will you provide?

Write a comparative note on wooden and metal sleepers.

4. A branch line on the 5'-6" gauge is joined to a straight main by means of a curve of 1,400 feet radius. The divergence at the heel of the switch is  $5\frac{1}{4}$  inches. Determine the number of the crossing and the length of the tongue rails for the switch. Assume the curve to spring from the toe of the tongue. Prove any formulæ used.



5. Write a note on providing waterway for railway culverts.

Give sketches for an arched masonry railway culvert to drain an area of 2 square miles in a place like Purulia, the height of embankment being 15 feet and the mean annual rainfall 60 inches.

6. Give a typical cross-section of a double line of railway in cutting, gauge 5'-6" with wooden sleepers and 115 lb. rails.

Describe, with neat sketches, how you would carry on the work of renewing wooden sleepers and replacing 90 lb. rails with 115 lb. rails on a section of a busy line.

#### SECOND HALF

1. (a) Explain the following terms, with sketches where necessary:—

Profile, Spoil bank, Angle of Repose, Camber, Causeway, Ruling Gradient, and Fairweather Road.

(b) What is the maximum gradient you would allow for the road approaches to an overhead railway bridge?

(c) What gradient would you endeavour to keep for a mountain road?

2. (a) What properties should a good road metal possess, and what are its functions?

Mention some of the most common road metal used in Bengal.

(b) Describe the method of consolidating a waterbound stone macadam road in Calcutta. Note the points to which attention is to be given during consolidation to ensure a good surface to the road.

3. What are the requirements you would expect from an ideal perfect road pavement?

Describe the method of construction of a Reinforced concrete roadway in Calcutta, with details of the points that, you consider, require special attention.

4. Sketch a cross section of a hillroad, partly in cutting and partly in bank on the hillside sloping 1 horizontal to 2 vertical. Describe in detail with sketches the drainage works necessary.

5. Describe in detail the operations that have to be carried out and note the points to be reported upon in preparing a road project. Give a list of the drawings that should accompany such a report.

6. (a) Mention some of the methods of dust-prevention in town-roads, and discuss the advantages and disadvantages of each.

(b) Write a short description of the materials and methods of construction of a tar or asphalt macadam road.

### IRRIGATION AND SANITARY ENGINEERING

Examiners--  $\left\{ \begin{array}{l} \text{MR. ABDUL JABBAR, B.E.} \\ \text{MR. F. C. GRIFFIN.} \end{array} \right.$

*The questions are of equal value.*

*Answer FOUR questions only from EACH half.*

#### FIRST HALF

1. Explain the following terms :—

(a) Piping and fountaining, (b) Backwater and afflux, (c) Retrogression of levels, (d) Talus, (e) Bandalling, (f) Breaching section, (g) Rising sill, (h) Impregnable head.

2. When carefully made an embankment leaks less than a cutting. Account for this. A certain part of a canal leaks badly but the leakage is undefined. Suggest a method how you can make the part staunch.

3. A weir 1,500 feet long is to be built across a river. The F.S.L. in the channel above the floor of the Head Sluice is 7 feet and the area of the sluice opening is such that a head of 6' inches is requisite to furnish the given supply. The normal water section of the river is 7,500 sq. ft.

and the estimated normal discharge 30,000 cusecs. What should be the height of the crest of the weir above the level of the sluice floor, the latter being placed at the bed of the river?

4. What are the objects of an irrigation canal Head Regulator? Describe with sketches how each is attained.

5. Discuss briefly how far embanking of alluvial rivers has succeeded in mitigating and controlling the ravages of flood, and how it has effected the agriculture and health of the country. Can you offer any other proposals for flood relief which are likely to prove useful?

#### SECOND HALF

1. What is meant by the following expressions?—

- (a) Sub-artesian conditions.
- (b) Depression head.
- (c) Critical velocity.
- (d) Activated sludge.
- (e) Digested sludge.
- (f) Proportional chlorination.

2. Make a list of the different sources of water supply available for municipal waterworks, mentioning against each the quality of water usually obtained and the treatment process necessary (if any).

3. What is meant by temporary and permanent hardness in water? What disadvantages are there in the use of hard water? Name two methods by which such a water is softened, and indicate by sketches the nature of the apparatus.

4. What are the root causes of intermittency in municipal water supplies? What are the evils resulting from it, and how can they be remedied?

5. A town is to be provided with a surface drainage system, and you are informed that the surface drainage works will be followed at once by sewerage on the partially separate system. On what basis would you calculate the sizes of surface drains and sewers, and which lengths of the surface drains would you make pucca?

What are the local data which must be collected?

6. Shew by a sketch with description how a sewer house connection is made, with a W.C. latrine on the first floor, and a kitchen sink on the ground floor. Shew all pipe connections and tanks.

### APPLIED MECHANICS

Examiners— { MR. C. V. MILLER.  
                  ,, P. N. BANERJEE.

*The questions are of equal value.*

*Only FOUR questions need be attempted from EACH half.*

#### FIRST HALF

1. A reinforced concrete beam of T shape has the following dimensions; width of slab, 90 in.; thickness of slab, 6 in.; thickness of rib, 12 in.; depth of centre of reinforcement below the compressive edge of beam, 30 in.; the reinforcement consists of six  $1\frac{1}{4}$  inch diameter steel bars. The maximum compressive stress in the concrete is to be 400 lb. per sq. inch. Find the position of the neutral axis, the average stress in the reinforcing bars, and the weight per foot run of the accidental load the beam will carry on a span of 25 feet which is continuous with other equally loaded spans of 25 feet on either side of it.

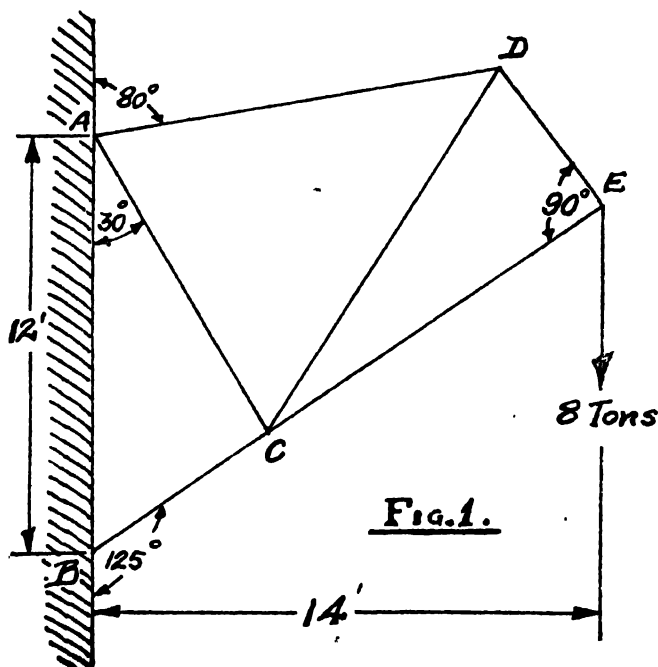
2. A continuous beam 30 feet long is carried on supports at its ends and is propped to the same level at points 10 feet and 22 feet from the left hand side. It carries loads of 5 tons, 7 tons, and 6 tons at distances of 7 feet, 14 feet, and 24 feet respectively from the left hand end. Find the bending moment at the props.

3. A stanchion designed for an axial load of 120 tons has a base 30 inches square. A two tier grillage foundation is required such that the foundation pressure does not exceed 1 ton per square foot. The lower tier consists of R.S. joists each  $8'' \times 4''$  by  $0.28''$  web and section modulus  $18.92$  inch units; the upper tier joists are each  $12'' \times 5''$  by  $0.35''$  web and section modulus  $36.36$  inch units. Determine the number of joists per tier such that the flange stress due to bending is  $7.5$  tons per square inch, and calculate for the number of joists proposed, the magnitude of the shearing stresses in tons per square inch.

4. A beam 26 feet long carries a uniformly distributed load of 3 tons per foot run. It is simply supported at one end and at some other point in its length. Find the position of the second support so that the maximum bending moment induced in the beam may be as small as possible. Draw neat sketches of the shearing force and bending moment diagrams, stating the maximum and zero values of each kind in magnitude and position.

5. A retaining wall 20 feet high and 5 feet wide at the top retains earth whose angle of repose is  $30^\circ$ . The earth face is vertical and its surface as the top of the wall is horizontal. Determine the base of the wall, assuming that the weight of the masonry is  $125$  lb. per c.ft. and of the earth  $100$  lb. per c.ft.

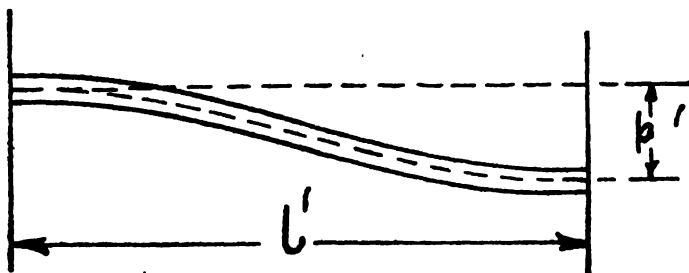
6. A framed cantilever is attached to a wall at  $A$  and  $B$  (Fig. 1). A single load of 8 tons is suspended at  $E$ . Find the magnitudes and directions of the reactions at  $A$  and  $B$  and the actual deflection of the point  $E$  when the areas, the forces, and the kinds of force in the various members of the frame are as shown in the table accompanying the figure.



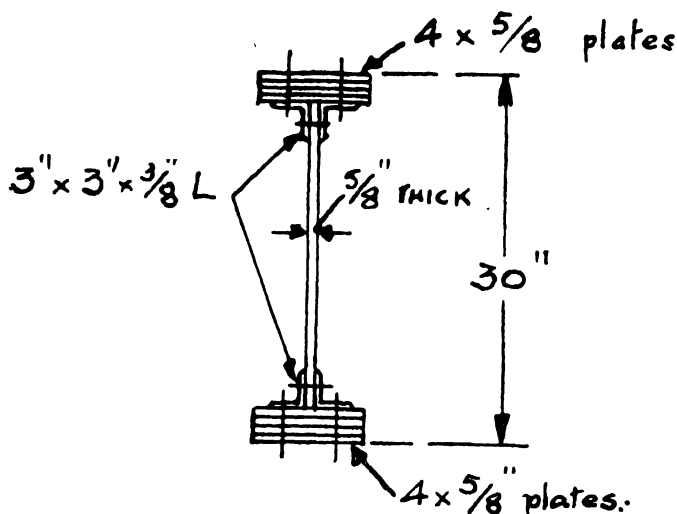
Member	SIZE of FORCE	KIND of FORCE	AREA
BC	11.44 tons	Compression	1.0 Sq. In.:
AD	7.82 "	Tension	$\frac{7}{8}$ "
AC	3.26 "	Tension	$\frac{3}{4}$ "
CD	7.80 "	Compression	$\frac{5}{8}$ "
CE	4.60 "	Compression	$\frac{1}{2}$ "
DE	6.51 "	Tension	$\frac{3}{8}$ "

## SECOND HALF

1. The ends of a beam are fixed to two walls  $l'$  ft. apart. Assuming that one wall has sunk  $p'$  ft. relatively to the other as shown in sketch, find the greatest bending moment and shearing force set up in the beam, neglecting its own weight.



2. A girder 15' long and freely supported at the ends is built up as in sketch. It carries a concentrated load of 80 tons at the centre. Find the pitch of the rivets connecting flange angle to the web. For a  $\frac{3}{4}$ " rivet in single shear permissible load may be assumed to be 2 tons and for  $\frac{1}{2}$ " rivet to be 3 tons.



3. A beam carries a load of 2 tons per foot run over the central half of its length and a load of 1 ton per foot run over the remaining portions. It is to be supported on two props, so that the greatest B.M. in the beam may be the least possible. Assuming the beam to be uniform in cross-section and to be 21 ft. in length, find the position of the props.

4. A three-hinged segmental metal arch 16' span and 4' rise carries a single vertical load of 10 tons at a quarter span point. Find the horizontal thrust and B.M. at the point of application of the load.

5. A R.C. cap 6 square and 2' deep transfers a total evenly distributed load of 60 tons to four 16" square piles fixed at its corners. Design the cap for tensile reinforcement only, taking the safe stress in concrete to be 600 lb. per sq. inch and in steel to be 10,000 lb. per sq. inch.

6. A hollow shaft, whose internal diameter is half of its external diameter, is required to transmit 100 H.P. at a speed of 60 R.P.M. Calculate the diameter of the shaft, if the shear stress is not to exceed  $4\frac{1}{2}$  tons per sq. inch.

## HYDRAULICS

Examiners—  $\left\{ \begin{array}{l} \text{MR. C. V. MILLER.} \\ \text{.. J. D. WATSON.} \end{array} \right.$

*The questions are of equal value.*

*Only FOUR questions are to be attempted from EACH half.*

### FIRST HALF

1. Find the dimensions of a trapezoidal earth channel of the most economical form to convey 700 cubic feet per second with a fall of 3 feet per mile and side slopes  $1\frac{1}{2}$  feet horizontal to 1 foot vertical. Take  $C$  as 100.

2. Sixty-three gallons of water per minute issue from a jet 0.75 inch in diameter and strike a number of hemispherical cups fixed to the rim of a Pelton wheel. Find the horse-power of the wheel when the velocity of the cups is one-half the velocity of the jet. An actual trial gave the following data :—

Diameter of brake = 15 inches ; Nett load on brake = 12 lb. ; Revolutions per minute = 500.

Determine the efficiency of the wheel.

3. A district of 6,500 acres (1 acre = 43,560 sq. ft.) drains into a large storage reservoir. The maximum rate at which rain falls in the district is 2 in. in 24 hours. When rain falls after the reservoir is full, the water requires to be discharged over a weir which has its crest at the ordinary top-water level of the reservoir. Find the length of such a weir for the above reservoir, under the condition that the water in the reservoir shall never rise more than 18 in. above its top-water level.

4. A pump working 8 hours per day has to lift water from a well and deliver it into an overhead service reservoir. The level of the water in the well is 22 feet below the level of the centre of the pump, and the mouth of the inlet pipe into the service reservoir is 216 feet above the centre of the pump. The quantity of water to be lifted per day is 700,000 gallons. Assuming that the velocity of flow in the delivery pipe is not to exceed 6 feet per second and that the length of the delivery pipe is 780 feet, determine a suitable diameter for the delivery pipe. Taking the coefficient of resistance of flow as 0.008 and assuming an efficiency of 70 per cent., determine the pump horse power.

5. A rectangular tank 24 square feet in area is drained by a pipe 2 in. in diameter and 50 feet long which runs to a point 15 feet below the water level in the tank. If the pipe has a free outlet, find how long it will take to lower the water level in the tank by 6 feet. Coefficient

of friction in pipe, 0.01 ; losses in pipe other than friction,  $4\frac{v^2}{2g}$ , where  $v$  is the velocity in the pipe

6. The piston of a double acting pump is 6 in. diameter, and the stroke is one foot. The delivery pipe is  $4\frac{1}{2}$  in. diameter and 500 feet long, without sharp bends. The water is pumped to a height of 200 feet. An air vessel of large capacity is put on the delivery pipe 10 feet from the delivery valve, and the level of the water in the air vessel is 3 feet above the centre line of the pump cylinder (which you may assume is horizontally placed). Calculate the pressure on the pump piston at the two ends of the stroke and at the middle of the stroke when the pump is making 15 double strokes per minute, assuming the motion of the piston to be simple harmonic and that  $f = 0.0075$ .

#### SECOND HALF

1. Two reservoirs are connected by a syphon 3,000 feet in length. The diameter of the pipe is 6 inches and at one point the pipe line rises 10 feet above the surface level in the upper reservoir. The total head between the reservoirs is 40 feet. Taking the coefficient of friction in the pipe as 0.005 and neglecting all but frictional losses, calculate by equating energies—

(a) the velocity of flow ;

(b) the maximum length of pipe from the upper reservoir to the top level of the syphon for the pipe to run full.

2. A motor fire engine delivers 224 gallons of water per minute into a line of hose 500 feet in length and 2½ inches in diameter. The pressure at the engine is 184 lb. per square inch and at the nozzle 84 lb. per square inch, the diameter of the nozzle being 1 inch.

(a) Calculate the energy of the jet, and find the value of the coefficient of friction for the hose, assuming that the loss in the nozzle may be neglected.

(b) If, for the first 400 feet, the hose is run in duplicate to a junction from which a single line leads to the nozzle, what pressure is required at the engine to maintain the same energy of jet?

3. An inward flow turbine makes 250 revolutions per minute and develops 320 H.P. Its outer diameter is 3 feet and its inner diameter is 2 feet 6 inches. The effective width of the wheel at inlet and outlet is 1 foot. The available head is 48 feet and 80 cubic feet of water are supplied per second.

Assuming that the water leaves the wheel radially, determine the theoretical hydraulic efficiency, the actual efficiency, and the angles of the guide and wheel vanes.

4. A turbine pump with vanes curved backwards has an outer radius of 12 inches and an inner radius of 6 inches, the tangent to the vanes at outlet being inclined at  $30^\circ$  to the tangent to the outer periphery. The water enters the wheel radially, and its radial velocity through the wheel is constant at 5 feet per second. The wheel makes 1,200 revolutions per minute.

(a) Determine the angle of the wheel vanes at inlet and the angle at entrance to the diffuser blades.

(b) Assuming that 50 per cent. of the kinetic energy of the water leaving the wheel is lost, and neglecting other losses, estimate the lift of the pump.

5. A semi-circular channel of smooth cement has a radius of 4 feet. The slope is 1 in 800. Calculate the discharge in gallons per diem when the depth of water is 2 feet.  $C$  in the Chezy formula may be taken as 135.

6. Two reservoirs,  $A$  and  $B$ , the water surfaces of which are 20 feet and 10 feet respectively above datum, are connected by a 12 inch diameter pipe line 2,000 ft. long. It is desired to place a third reservoir,  $C$ , half way between  $A$  and  $B$ , so that the water flowing from  $A$  to  $B$  may pass through  $C$ , and the water level in  $C$  may be 12 feet above datum.

Taking account only of pipe friction, find the sizes of pipes needed from  $A$  to  $C$  and from  $C$  to  $B$ , if the discharge is to remain unaltered.

Take the coefficient of friction for the pipe as 0.01.

## MECHANICAL ENGINEERING

Examiners— { Mr. P. C. GANGULI.  
PARANJYOPI.

*The questions are of equal value.*

*Attempt THREE questions only from EACH half.*

### FIRST HALF

1. Two pulleys on parallel shafts 20 feet apart and having diameters of 6 feet and 1 foot respectively are connected by an open belt 8 inches broad. The larger pulley makes 120 revolutions per minute. Find the greatest power which can be transmitted when the maximum stress in the belt has not to exceed 80 lb. per inch of width, and taking the coefficient of friction between belt and pulleys at 0.4. Prove any formula you use.

2. The difference between the driving and back pressures in a steam-engine cylinder is 60 tons when the crank is  $60^\circ$  from the inner dead point. The reciprocating parts weigh 7 tons. The connecting rod

is 5 times as long as the crank, which is 3 feet in length. Calculate the corresponding value of the turning moment on the crankshaft when the speed is 60 r.p.m. Any formula or graphical method that may be used must be proved.

3. The reciprocating parts of a two-cylinder locomotive weigh 550 lb. per cylinder. Two-thirds of this amount is balanced by means of balance weights placed in the driving wheels. The revolving masses are completely balanced. Find the maximum pressure between a driving wheel and the rail at 60 miles per hour from the following data. —

Diameter of driving wheel, 7 feet; static load on driving wheel, 6 tons; distance centre to centre of cylinders, 2 feet; distance between the planes in which the mass centres of the balance weights in the driving wheels revolve, 5 feet; crank radius, 1 foot.

4. The balls of a Porter governor weigh 4 lb. each, and the central weight 36 lb. If all the links are of equal length, find the height of the governor when revolving 240 times per minute. If the speed increase to 248 revs. per minute, what will be the working effort and the rise of the balls and the sleeve? Prove any formula you use.

5. In a gas engine using the Otto cycle the I.H.P. is 8 and the speed is 264 r.p.m. Treating each fourth single stroke as effective and the resistance as uniform, find how many foot pounds of energy must be stored in the flywheel in order that the speed shall not vary by more than one-fortieth of its mean value on either side.

#### SECOND HALF

1. Prove that the maximum intensity of shear stress on a vertical cross section of a horizontal beam of circular section subject to bending is  $1\frac{1}{2}$  times the mean intensity of shear stress on that section.

A cast iron pipe, 6" external and  $4\frac{1}{2}$ " internal diameter, is subjected to bending. What is the maximum bending moment if the stress is not to exceed 1,500 lb. / sq. in.?

2. Find the dimensions of the stiffest beam that can be cut from a log 6" in diameter.

Any formula used should be derived from first principles.

3. Obtain an expression for determining the point of maximum deflection in the case of a simply supported beam with a non-central load.

A mild steel rod 2" square in section rests on supports 4 feet apart. Assuming a reasonable value for  $E$ , calculate the deflection under a central load of 1 ton.

4. Derive from first principles the formula for the deflection of a close coiled helical spring of circular section.

A shaft 3" in diameter and running at 100 r.p.m. is subject to a bending moment of 7.5 ton inches. What is the maximum H.P. it can transmit without the greatest stress exceeding 5 tons / sq. in.?

5. Prove the correctness of the well known rule for masonry: 'within the middle third'.

A short cast iron pillar has a load of 24 tons but the axis of the thrust deviates  $1\frac{1}{4}$ " from the centre of the section. If the external and internal diameters of the pillar are 8" and 7" respectively, find the greatest and least intensities of stress.



## ELECTRICAL ENGINEERING

Examiners— { PROF. M. SENGUPTA.  
MR. J. N. MUKHERJEE, C.E.E.

*The questions are of equal value.*

*(Only FOUR questions to be attempted from EACH half).*

## FIRST HALF

1. A certain six-pole generator is driven at a speed of 900 r.p.m. The flux per pole is  $5 \times 10^6$  maxwells. Calculate the number of inductors necessary to generate 225 volts when the armature is (a) Lap-wound, (b) Wave-wound.

If the allowable current per conductor is 15 amps., find the line current in each of the above two cases.

2. If a p.d. of 100 volts is maintained over a load of 10 ohms resistance in each of the following cases, determine the generated e.m.f. in the armature when the machine is—

(a) a series generator, armature resistance =  $R_a = 0.2$  ohm and field resistance  $R_f = 0.3$  ohm ;

(b) a shunt generator, armature resistance =  $R_a = 0.5$  ohm and field resistance =  $R_f = 80$  ohms ;

(c) a short-shunt compound generator, armature resistance =  $R_a = 0.5$  ohm, resistance of shunt-field =  $R_f = 80$  ohms, and resistance of series field =  $R_s = 0.2$  ohm ;

(d) a long-shunt compound generator,  $R_a = 0.5$  ohm and  $R_f = 80$  ohms and  $R_s = 0.2$  ohm.

3. If the load on a 500 volt system consists of a synchronous motor taking 50 kilowatts at P.F. = 1 and induction motors taking a total load of 150 k.w. at an average P.F. = 0.6 lagging, find the gross P.F. of the whole load and the values to which this rises when the synchronous motor is made to take leading currents with P.F. of (a) 0.8, (b) 0.5.

4. Explain clearly, with the aid of a diagram, the principle of Telegraph Relay.

What is the difference between Polarised Relays and Non-Polarised Relays? What type of relay would you use on a long distance telegraph circuit? Give reasons for your answer.

5. If a three-wire feeder and a two-wire feeder both transmit the same amount of power the same distance with the same voltage at the consumer's terminals, and with the same transmission efficiency, then the three-wire feeder, if balanced, requires only  $\frac{1}{16}$  (five-sixteenths) as much copper as the two wire feeder. Prove this statement, assuming that the middle wire or neutral has half the cross-section of either outer.

6. Two resistances 'A' and 'B' are connected in series across constant p.d. mains. A voltmeter having a resistance of 1,500 ohms indicates 120 volts when connected across the mains, 30 volts when connected across 'A' and 50 volts across 'B'. Determine the values of the resistances 'A' and 'B'.

## SECOND HALF

1. Explain what you mean by an equivalent circuit of a transformer. Illustrate with vector diagrams. A transformer used for lighting loads has the following specifications :—

Maximum efficiency at 0.7 of full-load.

Voltage ratio = 6,000 volts/230 volts.

No load current (on the primary side) = 0.5 ampere.

No load power-factor = 0.2 lagging.

Full load K.V.A. = 100.

Calculate the efficiencies at full-load and half-load at unity power-factor.

2. What are the limitations for the use of an auto-transformer? Compare the efficiency of an auto-transformer with that of a two-coil transformer for the same output and voltage ratio.

3. What is the effect of varying the excitation of a synchronous motor? Explain clearly with vector diagrams.

A generating station supplies power for the following loads :—

(a) Lighting = 100 k.w.

(b) Induction motor with 0.8 P.F. lagging and efficiency of 93% = 400 H.P.

(c) Synchronous convertor with efficiency of 94% and an output of = 500 k.w.

At what power-factor must the synchronous convertor work in order that the station power-factor shall be unity.

4. Plot the torque/speed curve of a 3-phase induction motor with rotor resistance 0.02 ohm and reactance 0.1 ohm each per phase. The motor has 4 poles and runs on a 50 cycle supply. Find the speed at which the torque is a maximum and also the additional resistance per phase in the rotor circuit to obtain the maximum torque at starting.

5. A condenser of capacitance 50 microfarad shunted by a non-inductive resistance of 100 ohms is connected in series with another non-inductive resistance of 50 ohms to a 200 volts, 50 cycle supply. Calculate the current in the condenser.

## PRINCIPLES OF ARCHITECTURAL DESIGN

Examiners— { PROF. C. V. MILLER.  
MR. S. W. WHITE.  
,, P. R. GHOSH.  
,, S. C. CHATTERJEE.

*The figures in the margin indicate full marks.*

*Two questions only to be attempted from EACH half.*

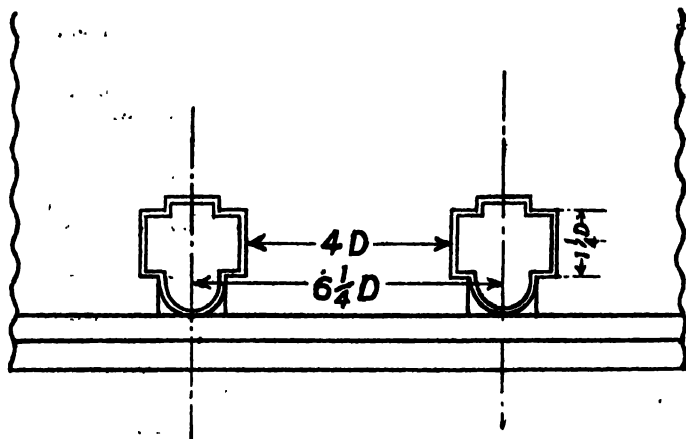
### FIRST HALF

1. Draw a plan and a front elevation of an archway in Corinthian or composite order, clear opening 15 feet, suitable for the outer court of a palace : scale 2' = 1 inch. 70

*Or,*

The figure below gives the plan of two consecutive piers of an arcade in Roman Doric style. Draw an elevation of the arcade, showing one full opening and half of each adjoining one. Total height of the order, excluding parapet, is 20 feet. Scale 2 ft = 1 inch.

Sketch details of the base and capital of the column.



2. Make neat freehand sketches for the plan, section, and elevation of a window  $7' \times 4'$  with balcony in Indian style. 30

Or,

Write a short essay on Byzantine architecture, describing its origin, special characteristics as compared with other styles, development and decline. Illustrate your answer with sketches. 30

#### SECOND HALF

1. Draw part plan and front elevation of a building of modern architecture suitable for a private dwelling house and conforming to the following requirements :—

- (i) It is to have a frontage of  $40'$  with ample side spaces.
- (ii) It is approached by road on the west.
- (iii) It is to be double storied, not exceeding  $32'$  including parapet.
- (iv) A garage for a big car with mezzanine floor on top for servants to be provided in front.
- (v) There should be a small sitting room and a fair sized drawing room in ground floor and two bed rooms in first floor facing road.
- (vi) Suitable porch, balconies, parapets, etc. to be provided.

[Scale  $44' = ''$ .]

75

2. Give a descriptive idea with sketches of the layout and architectural features of either of the following buildings visited during your college tours :—

(a) The Victoria Memorial, Calcutta.

Or,

(b) The Bengal Cotnrcil House Chamber.

25

## M.E. THEORY OF MACHINES

Examiners— { Mr. A. H. AHMED, B.Sc.  
                  { „ J. A. STEVEN.

*The questions are of equal value.*

*Only THREE questions to be attempted from EACH half.*

### FIRST HALF

1. The effect of the spring in constraining the balls of a spring governor is found by observing the force to be applied radially at each ball to keep the mechanism in any required position. This force is equal to  $15r-30$  lb. where  $r$  is the radius of the ball path in inches.

Find the working radius when the speed is 270 r.p.m. if the weight of each ball is 6 lb. Also find by how much the initial force in the spring must be altered in order to make the governor isochronous. What will then be the working speed?

2. The reciprocating parts of a horizontal engine weigh 500 lb. The diameter of the cylinder is 18 inches and the crank radius 1 foot. The length of the connecting rod is 5 feet. When the crank has turned through an angle of  $45^\circ$  from the inner dead centre, the difference between the pressure on the two sides of the piston is 120 lbs. per square inch. Find the corresponding value of the turning moment on the crank shaft when the speed is 200 revolutions per minute.

3. A gas engine working on the Otto cycle fires at every alternate revolution when working at normal load. If the B.H.P. is 7, and the mean speed 300 revolutions per minute, find the moment of inertia of the rotating parts in foot ton units necessary to keep the speed within a range of 2 per cent. above and 2 per cent. below the mean speed, on the assumption that the work performed during the explosion stroke is  $\frac{1}{2}$  of that done externally per cycle, and that the external resistance is uniform.

4. A thrust block collar is 10 in. in external diameter, and 6 in. in internal diameter and carries a load of 10 tons. It rotates at 120 r.p.m. and the coefficient of friction is 0.02. Determine the horse-power lost in friction (a) assuming the pressure intensity to be constant, (b) assuming the pressure to be inversely proportional to the rubbing velocity.

5. The accompanying figure (Fig. 1) is an outline sketch of a Joy valve gear drawn to scale. You are required to construct for the position of the crank shown when the crank is making 180 r.p.m. :—

(a) A velocity diagram.

(b) An acceleration diagram.

Crank radius is 13 inches. Find the inertia forces on the rod AB, which is of uniform section and weighs 24 lb.

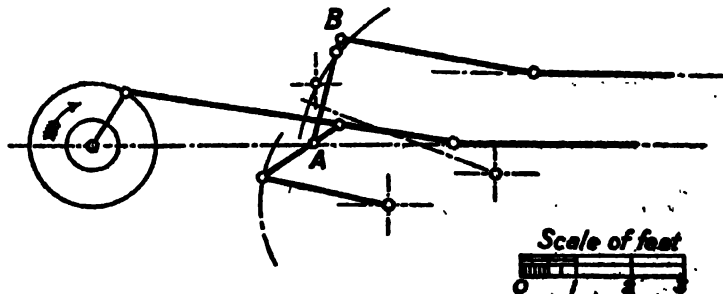


FIG. 1.

## SECOND HALF

1. A rope drive has the following particulars: single rope running at 4,000 feet per minute; coefficient of friction 0.25; angle of groove  $45^\circ$ ; angle of lap  $210^\circ$ ; maximum permissible tension in rope 240 lb.

Find the maximum horse-power, which, neglecting centrifugal action, can be transmitted, proving any formulae used.

2. In a motor car engine the connecting rods measure  $12\frac{1}{2}$  inches between centres. The engine stroke is 5 inches and the speed is 1,500 revolutions per minute. When a crank has moved through 25 degrees from the dead centre adjacent to the cylinder, find (a) the velocity of the piston attached to that crank in feet per minute, (b) the acceleration of the piston, in feet per second per second, (c) the angular velocity of the connecting rod, and (d) the angular acceleration of the connecting rod.

3. Define circular pitch and diametral pitch for toothed gearing, and give the relation between them.

A gear wheel has 21 involute teeth and a diametral pitch of 3. The angle of obliquity is 15 degrees. Draw the shape of a tooth on the wheel.

Or,

A square threaded screw of rear diameter  $d$  and pitch  $p$  is used to raise a load  $w$ . Obtain an expression for the torque necessary to overcome friction in the threads if the coefficient of friction is  $\mu$ .

Also obtain an expression for the maximum shear stress produced in the material of this screw by the application of this torque. Hence find the least diameter of a screw  $\frac{1}{2}$  inch pitch which can raise a load of 10 tons without exceeding a shear stress of 5 tons per square inch if  $\mu = 0.2$ .

4. The weight of the reciprocating masses in each of the two inside cylinders of a locomotive is estimated at 540 lbs. The stroke of the cylinder is 26 inches and the distance between their centre lines 2 feet. The cranks are at right angles. Determine the balance weights which must be placed in the driving wheels at 3 feet radius in order to give primary horizontal balance to  $\frac{2}{3}$  of the reciprocating masses. The distance between the planes in which the balance weights revolve may be taken as 59 inches.

## HEAT ENGINES

Examiners— { Mr. P. C. GANGULI.  
                  ,, E. J. HOGGEN.

*The questions are of equal value.*

THREE questions only to be attempted from EACH half.

## FIRST HALF

1. A single-stage double acting air compressor of 40 I.H.P. at 120 r.p.m. takes in air at 15 lb. per sq. in. and delivers it at 120 lb. per sq. in. (abs.); the index of the compression curve is  $n = 1.35$ . Find the diameter of the cylinder and length of stroke at the average piston speed of 600 feet per min. Neglect clearance.

2. With reference to a refrigerating machine define: coefficient of actual performance and coefficient of ideal performance.

Discuss the relative merits of the chief refrigerants.

In an ammonia refrigerating machine ammonia vapour, at a pressure of 400 lb. per sq. in. abs. and of dryness fraction 0.95, is compressed

'adiabatically to a pressure of 800 lb. per sq. in. abs. The vapour is then cooled at constant pressure (800 lb. per sq. in. abs.) in the condenser to a temperature of  $10^{\circ}\text{C}$ . and passed through the expansion valve, the pressure falling to 400 lb. per sq. in. abs. Find the coefficient of performance, the temperature at the end of throttling, and the temperature at the end of adiabatic compression. Given the temperature of the vapour at the end of expansion, how will you find its condition when it enters the compressor so that the coefficient of performance may be a maximum. Prove your statement.

3. A gas engine working on the four-stroke cycle has to develop 25 B.H.P. with a mechanical efficiency of 80 per cent., when there are 80 explosions per min. Determine the necessary diameter of the cylinder if the stroke is 2 ft. The equations to the expansion and compression curves are  $pv^{1.25} = \text{constant}$ . The clearance volume = 0.25 working volume and the maximum pressure after ignition = 3 times the compression pressure.

4. A compound steam engine is to develop 125 horse-power at 110 revs. per min. The steam supply is at 105 lb. per sq. in. abs., and the condenser pressure is 3 lb. per sq. in. abs. Assuming hyperbolic expansion and an expansion ratio of 15, a diagram factor 0.7 and neglecting clearance volume and receiver losses, determine the diameters of the cylinders so that they may develop equal power. The stroke of each piston may be taken equal to the low pressure cylinder diameter.

5. A divergent nozzle for a steam turbine has to deliver 800 lb. of steam per hour under a supply condition of 160 lb. per sq. in. abs. and  $200^{\circ}\text{F}$ . of superheat, and a stage pressure of 1.5 lb. per sq. in. abs. Assuming a coefficient of discharge of 0.97 and a frictional loss of 12 per cent., determine the throat and outlet areas.

## SECOND HALF

1. Describe the Orsat gas analysis apparatus as used for analyzing furnace flue gas, carefully describing exactly how you would use it for this purpose. What practical useful purpose is fulfilled by knowing the chemical analysis of flue gases?

2. By means of indicator diagrams show the Otto and Diesel cycles. Also show the general form of diagrams you would expect from practical engines working on these cycles. What sort of a diagram would you expect from a motor cycle engine when running very fast? State where, and why, it differs from the theoretical diagram.

3. In what respects does a semi-diesel engine differ from a diesel engine? Why are semi-diesel engines used under circumstances in which diesel engines can be used?

What is meant by a solid injection engine?

What maximum and minimum pressures would you expect to get in these engines when not supercharged? Why is supercharging sometimes adopted?

4. By means of sketches show the Rankine cycle on a temperature-entropy diagram in the following cases:—

(a) Non-condensing engine : 80% wet steam.

(b) Condensing engine : dry saturated steam.

(c) Two stage steam turbine; superheated steam; wet steam at end of first stage; reheat to dry steam at beginning of second stage. Back pressure of first stage 10 lb. /in.<sup>2</sup> abs.

Also by freehand sketches show the same diagrams on a Mollier diagram.

The names of the principal lines on the diagrams should be given. Also show the areas or lines which represent the heat converted into useful work, and the heat rejected.

## HYDRAULICS AND HYDRAULIC MACHINERY

Examiners—  $\left\{ \begin{array}{l} \text{MR. P. C. GANGULI.} \\ \text{,, J. N. DASGUPTA, B.E.} \end{array} \right.$

*The questions are of equal value.*

*Attempt THREE questions only from EACH half.*

## FIRST HALF

1. A tank has sloping sides and ends. It is 50 feet square at the top and 30 feet square at the bottom; the height of the tank is 20 feet. In the bottom of the tank there is a circular orifice 6 inches diameter; coefficient of discharge 0.6. Find the time taken for the surface to fall from a depth of 20 feet to 14 feet.

2. What is meant by 'separation' in a reciprocating pump? The plunger of such a pump moves with simple harmonic motion. The diameter is 12 in. and the stroke 2 feet. Calculate the maximum speed at which the pump can operate without separation occurring at the beginning of the stroke. Take the effective height of the barometer as 28 feet of water. The suction pipe line is 9 inches diameter and 80 ft. long and the suction lift is 14 ft.

3. With reference to a turbine define: Specific speed, Unit speed, Unit quantity. Find an expression for the Specific speed of a turbine. The peripheral speed of the wheel of an inward flow turbine is 70 feet per sec. The velocity of whirl of the inflowing water is 55 feet per sec. and the radial velocity of flow 7 feet per sec. If the flow is 24 cusecs and the hydraulic efficiency 80 per cent., find the head on the wheel, the horse-power of the turbine, the inlet angle of the vanes. The discharge is radial.

4. Find the minimum speed at which a centrifugal pump will begin to pump against a given head. The impeller of a centrifugal pump has an external diameter of 12 in. and an internal diameter of 6 in. If full of water with the discharge pipe closed, what would be the difference of pressures at the outer and inner periphery, corresponding to a speed of 300 r.p.m.

5. The loss of head in a pipe 1 in. diameter and 100 feet long through which water is flowing at 10 feet per sec. was found to be 7 feet of water. Calculate the loss of head in a 3 inch pipe 60 ft. long through which air is flowing at the corresponding speed. The resistance is due to viscosity alone.

$\rho$  per c. ft.

Water ...	62.4 lb.	0.01 C.G.S. units.
Air ...	0.075 lb.	0.00015 C.G.S. units.

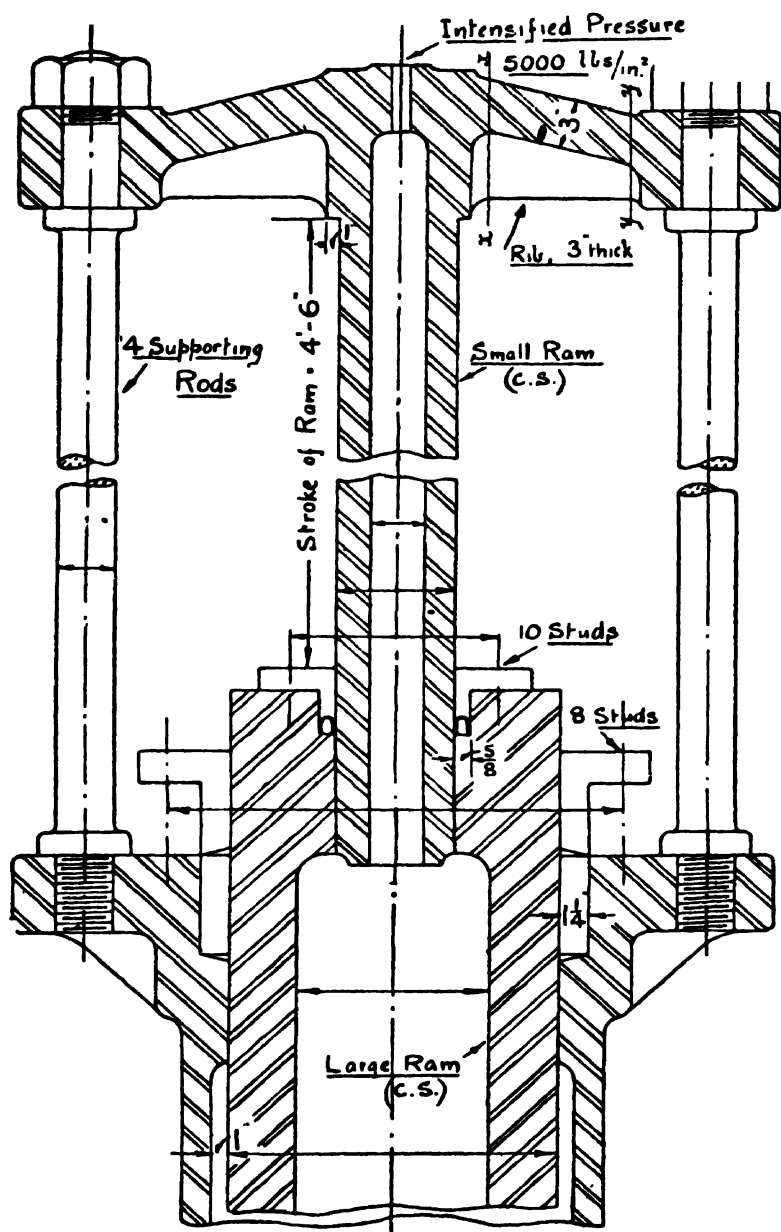
Establish any formula you use.

## SECOND HALF

1. Water at a total head of ' $h$ ' feet is supplied to the end of a pipe ' $d$ ' feet in diameter and ' $l$ ' feet long. A nozzle is fitted to the other end.







Find the diameter of the nozzle for the kinetic energy of the jet to be a maximum.

2. A hydraulic motor makes 60 strokes per minute, the length of stroke being 10 inches and the diameter of the cylinder 6 inches. The motor is double acting and is supplied with water at 300 lb. per sq. inch through 300 feet of 3 inch main. Find the pressure on the piston at the beginning, middle, and end of the stroke.

Assume the piston moves with S.H.M. Take  $f = .01$ .

3. A 48" main is delivering 15 lakhs gallons of water per hour and is to be fitted with a Venturi meter. What will be the throat diameter if the difference in pressure head between throat and entrance is to be not more than 5 lb. per sq. inch.

4. Describe, with sketches, a hydraulic intensifier.

An intensifier is required to deliver 4 gallons of water per stroke at a pressure of 2,240 lb. per sq. inch, the pressure in the hydraulic main being only 750 lb. per sq. inch. Determine suitable values for the diameters of the rams and the length of stroke.

5. A water wheel is supplied with water from a jet at a velocity  $v_1$ , while the linear velocity of the centre of the blades is  $v_2$ . At what ratio of  $v_1$  to  $v_2$  is maximum efficiency obtained?

A wheel is acted on by 10 cubic feet of water per second moving at a velocity of 50 f.p.s. Calculate—

- the pressure of water on the vanes ;
- the H.P. developed ;
- the theoretical efficiency of the wheel if  $v_2 = 27.5$  f.p.s.

## MACHINE AND ENGINE DESIGN

Examiners—  $\left\{ \begin{array}{l} \text{MR. C. R. COPELAND.} \\ \text{J. M. IRVINE.} \end{array} \right.$

*The figures in the margin indicate full marks.*

### FIRST HALF

1. The accompanying figure shows the sectional elevation of a hydraulic intensifier for raising the pressure of water from 700 lb./in.<sup>2</sup> to 5,000 lb./in.<sup>2</sup>, the low pressure cylinder having a capacity of 8 cubic feet and the ram a stroke of  $4\frac{1}{2}$  feet.

Design the intensifier, and calculate the dimensions indicated, allowing 7½% for extra friction on the large ram, etc.

The following working stresses may be used :—

Hoop stress for cast steel = 10,000 lb./in.<sup>2</sup>.

Tensile stress in gland studs and supporting rods = 8,000 lb./in.<sup>2</sup>.

(1) Draw the sectional elevation to scale,  $\frac{1}{4}$  full size, inserting all the main dimensions.

(2) A plan of the crosshead only.

[Note.—The crosshead, which is one casting with the small ram, has four arms of 'T' section, and the stress at sections 'xx' and 'yy' must not exceed 8,000 lb./in.<sup>2</sup>. 100

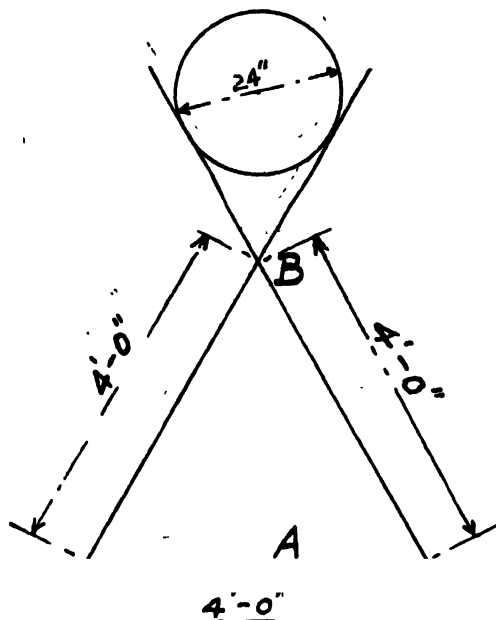
### SECOND HALF

*Only two questions are to be attempted from this half.*

1. A steel multiple leaf carriage spring is required to carry a central load of one ton.

The length of the longest plate is to be 36 inches and the plates are to be 3 inches wide by  $\frac{1}{4}$  inch thick. Work out the number of plates, length of each and deflection if stress is limited to 12 tons per square inch.  $E = 30,000,000$  lbs. per sq. in.

2. A tunnel shaft 24 inches in diameter and weighing 4 tons is to be supported on two trestles as shown diagrammatically in the sketch. Work out a suitable diameter for the tie rod at *A* and for the pin at *B*, assuming that the stress is not to exceed 8 tons per square inch. 50



3. Design the cylinders of a compound condensing engine to drive a direct coupled dynamo at 400 R.P.M., giving out 300 Amps. at 110 Volts, with Mechanical Efficiency of 0.85.

The boiler pressure is 180 lb. per square inch. The actual terminal pressure is 10 lb. absolute and this is only  $\frac{1}{10}$  of the theoretical terminal pressure. The actual Mean Referred Pressure is also only  $\frac{1}{10}$  of the theoretical mean pressure. The back pressure is 4 lb. absolute. The cut-off in the H.P. cylinder is at 0.5 of the stroke. Find the Indicated Horse-Power, and get out suitable diameters for the cylinders, assuming the stroke to be 7 inches.

$$\text{The M.R.P.} = \left[ \frac{P}{R} (1 + 2.3 \log R) - B.P. \right] 0.7.$$

4. Sketch a treble rivetted double butt strap joint of a boiler, given the following particulars. The thickness of the plate is  $\frac{1}{2}$  inch. The pitch in the outer row of rivets is 14 inches, the pitch in the middle row is 7 inches, and that of the inner row is  $3\frac{1}{2}$  inches. The inner strap takes 3 rows of rivets, while the outer strap only covers 2 rows of rivets.

Allowing  $1\frac{1}{2}$  for double shear and  $\frac{2}{3}$  ratio of strength of rivets and plate, work out the size of rivets, to the nearest  $\frac{1}{16}$  of an inch, required for maximum efficiency. Find the percentage strength of the seam, and state where it would fail if tested to destruction.

## STRENGTH AND ELASTICITY OF MATERIALS

Examiners—  $\left\{ \begin{array}{l} \text{Mr. P. C. GANGULI.} \\ \text{„ G. P. CHESTNEY.} \end{array} \right.$

*The questions are of equal value in EACH half.*

## FIRST HALF

*Attempt THREE questions only from this half.*

1. Find the greatest intensity of vertical shear stress on an I section 10 inches deep and 8 inches wide, flanges 0.97 inch thick, and web 0.6 inch thick, when the total vertical shear stress on the section is 30 tons. What is the ratio of the maximum to the mean intensity of vertical shear stress? Prove any formula you use.

2. A shaft, 2 inches diameter, is subjected to a bending moment of 6 tons-inches. If it runs at 100 revolutions per minute, what horse-power can it transmit without the greatest direct stress exceeding 5 tons per square inch? Prove any formula you use.

3. Find the thickness of metal necessary in a hydraulic cylinder 12 inches diameter to stand a pressure of 1,200 lb. per square inch if the greatest tension in the material is not to exceed 4,000 lb. per square inch.

Prove any formula you use, and state the assumptions made.

4. A rectangular bar, 2 inches wide and 3 inches deep, is curved in a plane parallel to its depth, the mean radius of curvature being 4 inches. If the bar is subjected to a bending moment of 15 ton-inches tending to reduce its curvature, find the maximum intensities of tensile and compressive bending stress.

5. A locomotive coupling rod, 100 inches long, is of I section, area  $6\frac{1}{4}$  square inches, moment of inertia 10 (inches)<sup>4</sup> about a central horizontal axis, and depth  $4\frac{1}{2}$  inches. The maximum thrust in the rod is 17 tons and the lateral inertia load at full load is 24 lb. per inch length. Neglecting friction at the pins, estimate the maximum compressive stress in the rod. ( $E=13,000$  tons per square inch.)

## SECOND HALF

NOTE.—Four questions only are to be answered; all are of equal value.

1. Two round bars, *A* and *B*, are each 10" long; *A* is 1" dia. for a length of 2 inches and  $\frac{3}{4}$  dia. for the remaining 8 inches. *B* is 1 inch diameter for 8 inches and  $\frac{3}{4}$  inch diameter for a length of 2 inches.

If *B* receives an axial blow sufficient to produce an axial stress of 15 tons per square inch, find the stress produced by the same blow on *A*. How much more energy could *A* absorb in this way than *B* without exceeding any given stress within the elastic limit?

2. At what fraction of its length from the free end should a uniformly loaded cantilever be propped to the level of the fixed end in order that the intensity of bending stress shall be as small as possible, and what proportion does this intensity of stress bear to that in a beam propped at the end to the same level? What proportion of the whole load is carried by the prop?

3. A pair of wheels of a railway waggon carries a load of six tons, four on one wheel and two on the other, centres of axle boxes 6 ft.  $2\frac{1}{2}$  inches, gauge of rails of 4 ft.  $8\frac{1}{2}$  in. Find the diameter of axle at the wheel seat and at the centre of the length of shaft. Safe stress 5 tons per sq. inch.

4. A shaft 8.5 in. diameter running at 150 revs. per min. transmits 50 horse-power between two pulleys 12 ft. apart. Determine (a) the

maximum stress in the shaft due to twisting; (b) the angle through which one pulley turns relatively to the other. Modulus of rigidity 5,000 tons per sq. in. Prove the formula you use.

5. A close coiled spiral spring has 24 coils; the mean diameter of the coil is 4 inches; the diameter of the wire from which the spring is made is  $\frac{1}{2}$  inch. Determine the axial load which will elongate the spring 6 inches, if the modulus of rigidity of the metal is 12,000,000 lb. per square inch.

## METALLURGY

Examiners—  $\left\{ \begin{array}{l} \text{PROF. N. N. SEN} \\ \text{MR. S. N. RAY} \end{array} \right.$

*The questions are of equal value.*

N.B.—Only THREE questions are to be answered in EACH half.

### FIRST HALF

1. What are the chief properties of good fireclay? Make a comparison between fireclay brick and silica brick in respect of (a) refractoriness, (b) behaviour in use, (c) suitability for use in an iron and steel works.

2. Write a discourse on the extraction and refining of lead and its uses in engineering and the arts.

3. Write notes on (a) electrochemical theory of corrosion, (b) case hardening with ammonia, (c) polishing and etching of micro-sections.

4. Draw the constitutional diagram of the copper-silver alloys, and discuss the structure of typical alloys of this system with the help of your diagram.

### SECOND HALF

5. Give an account of the chemistry of an acid Bessemer blow with special reference to the rate of elimination of the impurities present in pig iron.

6. Describe one type of electric furnace for steel making, and explain its use.

7. Give the composition of a typical high-speed steel. What is the constitution of such a steel, and how is it affected by heat treatment?

8. Write a short essay on nickel chrome steels with special reference to their manufacture, properties, and heat treatment.

Give the typical compositions of at least three such steels, and state the purposes for which they are used.

## THEORY OF STRUCTURES

Examiners—  $\left\{ \begin{array}{l} \text{MR. P. B. GHOSH.} \\ \text{KHAN BAHADUR TAFAZZAL AHMED.} \end{array} \right.$

*The questions are of equal value.*

### FIRST HALF

N.B.—Answer ANY FOUR questions from the first half.

1. A cast-iron bracket carries a bearing as shown in Fig. 1 below. The load on the bearing is 1,000 lb. The form of the section AB is

given. Calculate the maximum tensile stress across the section  $AB$  and the distance of the neutral axis of the section from the centre of gravity of the section.

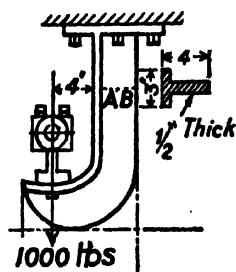


FIG. 1.

2. A reinforced concrete short column is 18" square and has four steel rods each 1" diameter embedded in it at the four corners, the centre of each rod being  $1\frac{1}{2}$  inches from the outside edges. Find the adhesive force between the steel and concrete when the load on the column is 100 tons. Find also the stresses developed in steel and concrete.

Take the Young's modulus of steel as  $30 \times 10^6$  lb./sq. inch and that of concrete as  $2 \times 10^6$  lb./sq. inch.

3. Construct Rankine's formula for struts with both ends hinged.

A mild steel stanchion, 12 feet high, is composed of two equal angles, each  $4" \times 4" \times \frac{3}{8}"$  battened together by  $\frac{1}{2}$  inch plates alternately in the directions  $AB$  and  $CD$ , as shown in the figure 2 below. Calculate the safe load on the stanchion if both of its ends are fixed. Assume the safe compressive stress of steel to be 6 tons per sq. inch and the value of the constant in Rankine's formula to be  $\frac{1}{7500}$ .

Maximum and minimum radii of gyration of a  $4" \times 4" \times \frac{3}{8}"$  angle section are 1.52 inches and 0.78 inch respectively. Area of each section = 2.86 sq. inches. Distance of centre of gravity from each edge = 1.12 inches.

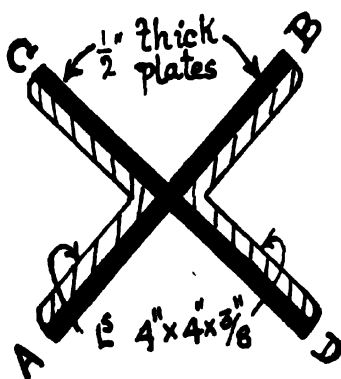


FIG. 2.

4. A beam 20 feet span is built-in at one end and is supported at a point 5 feet from the other end. Draw to scale the Bending Moment and Shear Force diagrams for a uniform load of 1 ton per foot run over the entire length of the beam.

5. A reinforced concrete continuous floor slab, 8 inches thick, carries a load of 100 lb. per sq. foot exclusive of its own weight over a span of 12 feet and is reinforced with 0.8% of reinforcement, the reinforcing bars being placed with their centres 2 inches from the bottom of the slab. Find the stresses developed in steel and concrete and arrange the reinforcement. Design the distributing rods. Give sections of the slab, showing the reinforcements clearly.

Weight of concrete = 150 lb. / c. ft.

$$\frac{E_s}{E_c} = 15.$$

### SECOND HALF

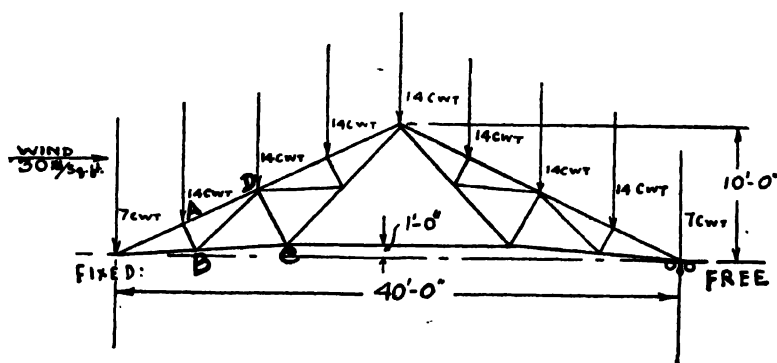
*Answer ANY THREE questions only.*

1. A beam simply supported and of length ' $l$ ' carries a load of  $W$  tons at a distance ' $nl$ ' from one end. Find an expression for the deflection (1) under the load, (2) at a section distant ' $\frac{1}{2}nl$ ' from one end.

2. A lorry whose wheel-base is 10 ft. carries 1.8 tons and 3.2 tons on the front and rear axles respectively and passes over a bridge span 30 feet (effective). Find the maximum bending moment and shear force.

3. Find the stresses in the members  $AB$ ,  $BC$ , and  $CD$  and also  $BD$  graphically of the roof truss shown in figure 3. Spacing of the trusses is 10 feet.

FIG. 3.



4. A warren girder having web members all inclined at  $60^\circ$  has six panels ten feet each, the first four panels from the left end are loaded on the bottom boom with five tons per panel uniformly distributed. Find the stresses in the inclined members of the unloaded panels by the method of sections.

## STRUCTURAL DESIGN

Examiners— { Mr. P. B. GHOSH  
                  { „ B. N. BHATTACHARYYA

*The figures in the margin indicate full marks.*

*Candidates are permitted to use Dorman Long's section book.*

## FIRST HALF

*Only two questions to be attempted from this half.*

1. Five loads,  $A$ ,  $B$ ,  $C$ ,  $D$ , and  $E$ , in the order given, cross a span of 80 feet. The loads are  $A=15$  tons,  $B=20$  tons,  $C=20$  tons,  $D=10$  tons,  $E=10$  tons. The distance between the loads in the same order are 6, 8, 6, and 5 feet. Draw the diagrams of maximum bending moment and shearing force. Write down the value of the maximum bending moment, and indicate the position where it occurs. Graphical or Influence Line method may be used. 60

2. Design the flanges and web of a plate girder of the same span and subjected to the same rolling loads as mentioned in Question 1. Depth of the girder over flange angles may be taken as 8 feet. Indicate how you will curtail the flange plates towards the end of the girder. 40

*Or,*

2. A plate girder, 50 feet span, 48 inches deep over flange angles, and 0.5" thick, carries a uniformly distributed load of 150 tons. Each flange consists of two  $6" \times 6" \times \frac{1}{2}"$  angles and two plates each  $14" \times \frac{1}{4}"$  at the central section. Assuming that  $\frac{1}{4}$ th of the web area can resist bending moment, find the necessary lengths of the flange plates. 40

Using  $\frac{7}{8}$  inch diameter rivets and allowing 5 tons per sq. inch in shear and 10 tons per sq. inch in bearing, calculate the pitch of rivets for attaching the flange angles to the web, for a length of 5 feet from one end, taking the pitch to be uniform for that length. Indicate also, by means of a table, how you would determine the pitch of rivets for the rest of the girder.

## SECOND HALF

*The questions are of equal value.*

*Four questions to be answered from this half.*

1. Design a reinforced concrete continuous floor slab on 9 ft. span to carry a superimposed load of 1 cwt. per sq. ft. Give sketches illustrating the disposition of the bars. Safe stresses on steel and concrete are 16,000 lb. and 600 lb. respectively per sq. inch, the weight of reinforced concrete is 144 lb. per c.ft., and the modulus ratio is 15.

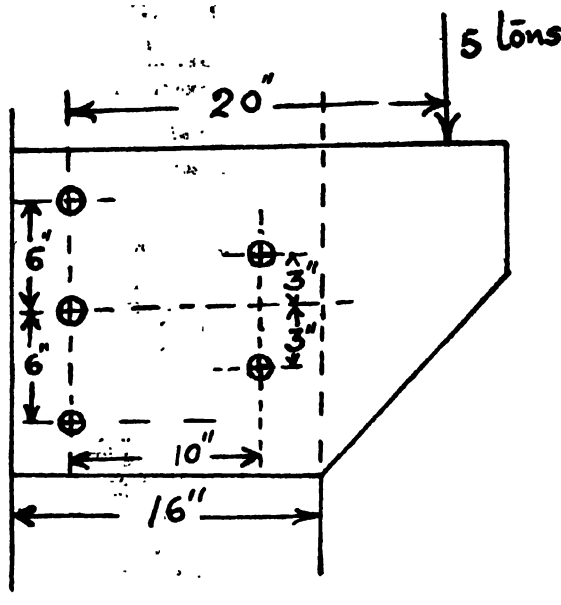
2. Design an economical steel section for a stanchion 30 ft. high with both ends fixed to carry a concentric load of 50 tons.

3. Design an open cylindrical water tank of reinforced concrete 12 ft. diam. and 10 ft. high resting on ground.

4. Design a steel section for the principal rafter of a V-truss, the distance between the consecutive joints is 10 ft. and the direct load is 5 tons; it also carries at the middle a load of 1 ton transmitted normal to it by a purlin. The joints of the rafter may be taken as hinged.

5. The figure below shows a bracket rivetted to a vertical stanchion and loaded with a concentrated load of 5 tons. Design each individual rivet, taking the safe shear stress at 3 tons per sq. inch.





## WORKS MANAGEMENT AND ACCOUNTS

Examiners— { MR. G. BASU.  
 „ W. GOW.

*The questions are of equal value.*

### FIRST HALF.

NOTE—Only FOUR questions are to be answered. Two are to be selected from among the first three, and two from among the last three.

1. Clauses 34 and 36 of the Factories' Act, 1934, place a restriction on the working hours of adult workmen. The present effect of this enactment on production in certain industries, is sufficiently serious to rouse resentment in some quarters on the grounds that, in the present state of industrial advancement in this country the supply of certain classes of skilled labour is not equal to the demand, and consequently the limitation of working hours reduces output seriously. Actually, however, the provisions of the act operate in the best interests of both employer and employee.

Discuss the statement made above fully, with a view to showing your grasp of the economic principles involved.

2. Name five wage-systems which you consider have most to recommend them. As no system can be considered as best for all conditions choose a hypothetical factory, and state what you consider to be the most suitable wage-system for its special conditions.

3. In a factory the commencement of any work is authorized by the issue of what is known as a 'factory order'. Design an order form of this type suitable for a general engineering shop.

4. Distinguish between Amortization and Depreciation where the terms are used in the sense of the wasting of an asset. In what other senses is the word 'Amortization' often used?

5. What is a Profit and Loss Account; and how is it prepared? If this account shows a nett loss, how is the amount of the loss dealt with in the accounts?

6. Upon what principles does the interlocking of the Cost Accounts with the Financial Accounts rest?

#### SECOND HALF

*Only THREE questions to be attempted from this half.*

1. Prepare a manufacturing account for the month of March, 1935, from the following particulars, and show the expenses as percentages of cost of production:—

	Rs.
Stock of Raw Materials on 1st March, 1935	... 13,000
Stock of Raw Materials on 31st March, 1935	... 9,000
Work in progress on 1st March, 1935	... 3,000
Work in progress on 31st March, 1935	... 5,000
Purchase of Raw Materials	... 35,000
Returns outward	... 1,000
Wages (direct)	... 23,000
Other manufacturing expenses	... 7,000

2. State the different ways in which surplus materials remaining unused at site can be disposed of, and how in each such case the disposal would affect the Cost Sheet.

3. What is 'Idle Time'? State how this is valued and considered in reference to cost of production.

4. A labourer, it is found, uses a particular class of materials in his work and has for this purpose to go to the Storeroom very frequently. State how the wastage of his time in thus frequenting the Storeroom may be avoided. Give the form of any book or statement that you may consider necessary in this connection.

5. Capital expenditure has been defined as expenditure of such a character as to necessarily involve further expenditure for upkeep in subsequent years. Give two examples of capital expenditure which would not be covered by this definition.

#### C.E. and M.E.

#### TECHNICAL CHEMISTRY AND ENGINEERING METALLURGY

Examiners— { MR. N. N. SEN.  
DR. H. K. SEN.

*The questions are of equal value.*

N.B.—Answer only THREE questions in EACH half.

#### FIRST HALF

1. Write notes on the following:—

- (a) Liquefaction; (b) Smelting; (c) Malleable casting; (d) Spiegeleisen; (e) Austenite; (f) Pearlite; (g) Sherardizing; (h) Calorizing.

2. State, giving reasons, the compositions of pig iron suitable for making steel by the Basic Bessemer and the Basic Open Hearth processes. Why is it not possible to use cast iron for purposes for which mild steel

is generally used. Make a list of six articles that can be made of either cast iron or mild steel without any serious harm.

3. Compare the merits and demerits of 'galvanizing' and 'tinning' with reference to (1) method of application, (2) smoothness of surface, (3) protection against rusting, and (4) cost of production.

4. Draw the constitutional diagram of the iron-carbon system, and explain the meaning and use of the steel portion of the diagram as fully as you can.

#### SECOND HALF

5. Compare the high and low temperature carbonization of coal in respect of the nature and yields of the various products obtained therefrom.

6. Calculate the total quantity of air required for the complete combustion of one cwt. of coal containing C=70%, H=4%, O=8%, S=2%, moisture=6%, and ash=10%, assuming that 150% excess air has been used.

[Air contains 23% of oxygen and 77% of nitrogen by weight.]

7. What impurities are to be regarded as harmful in water to be employed for the following purposes?—

(a) Drinking; (b) Steam raising; (c) Irrigation.

How are they removed or reduced in order to render the water suitable for those purposes?

8. What are the modern views regarding the nature of chemical compounds present in cement clinker? What is the part played by water in the setting and hardening of Portland cement?

What do you know about aluminous cement, iron-slag cement, and white cement?

9. Name the principal ores of copper, and describe, giving equations, the processes of extraction and refining of copper from sulphide ores. Differentiate between 'tough pitch' copper and 'electrolytic copper'. Mention the chief uses of copper in engineering.

### TECHNICAL CHEMISTRY AND ENGINEERING METALLURGY—Practical

Examiners—  $\left\{ \begin{array}{l} \text{MR. N. N. SEN.} \\ \text{DR. H. K. SEN.} \end{array} \right.$

#### C.E.

1. The solution given to you originally contained sulphuric acid, which was later on partially neutralized with caustic soda. Estimate the free sulphuric acid still present, as well as the total sulphuric acid originally present in the solution. Express your results as  $\text{H}_2\text{SO}_4$ .

2. Submit your practical note-book.

#### M.E.

1. Estimate gravimetrically the total quantity of copper in the given solution.

2. Estimate volumetrically the total quantity of caustic soda in the given solution.

3. Submit your sessional work.









